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ABSTRACT

Elementary students who are overage due to retention are compared with those who are overage for other reasons on both at-risk indicators and demographic factors. Records of 127 fifth, sixth, and seventh graders were examined with respect to student performance on academic indicators of at-risk behavior. Findings indicate that overage students were at greater risk for failure to complete academically appropriate programs than were other members in their cohort and that grade retention was not a significant factor of academic failure. No significant differences were found to exist among the academic indicators of at-risk performance, absence, and demographics between those retained and those not retained. Recommendations are made to consider interventions and practices other than in-grade retention and to reexamine district policies. Thirty-four tables are included. (132 references) (LMI)

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THE OVERAGE STUDENT:

CANDIDATE FOR SCHOOL FAILURE

by

Virginia Homeier Anderson

A dissertation submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION
in
EDUCATIONAL LEADERSHIP

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AN ABSTRACT OF THE DISSERTATION OF Virginia Homeier Anderson for the Doctor of Education in Educational Administration presented April 23, 1990.

Title: The Overage Student: Candidate for School Failure

John Lind, Chair

This study, conducted in a suburban school district, examined academic achievement and demographic considerations for a group of students overage for their respective grades. Records of 127 subjects were examined and data collected with respect to student performance on academic indicators of at-risk behavior.

Indicators were scores on criterion referenced tests in reading and mathematics as well as school absence figures for all subjects. These data were subjected to ANOVA and Chi Square Tests of significance to ascertain if there were differences between the students who were overage due to in-grade retention and those overage for other reasons.

Research hypotheses were formulated as null statements which averred there would be no differences within or between groups and further, that there would be no differences between the groups with regard to gender, ethnicity, participation in Federal meal plans and identification as handicapped under the provisions of PL 94-142.

Significance was demonstrated only in regard to reading scores of all subjects in the primary research hypothesis. This apparent significance may be due to other factors. The secondary research hypothesis was supported. The demographic hypothesis was supported in regard to gender and minority group membership.

CONCLUSIONS AND RECOMMENDATIONS

1. This study supports other research evidence that overage students are at greater risk for failure to complete academically appropriate programs than are their age-appropriate cohort.
2. This study demonstrates that indicators of school failure can be seen during the elementary school years in the population of students who are overage for their grades whether or not they were retained in grade.
3. There appears to be no distinction in terms of academic indicators of at-risk performance, absence and demographic considerations between subjects who were retained in-grade and those who were older for other reasons e.g., starting school a year after the legally permitted age.
4. Disadvantaged, male, minority, and handicapped students were overrepresented in both groups.
5. This study adds validation to the literature which overwhelmingly fails to support retention or other

interventions which leave students overage for grade.

6. Schools need to devise and install interventions other than in-grade retention and other practices rendering the student older than the age-grade cohort.
7. Educators should examine district policies regarding overage students and in-grade retention for congruence with research findings as opposed to the tacit belief systems of many educators, parents, community members and legislators.

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CHAPTER I

STATEMENT OF THE PROBLEM

There is little doubt that a large number of factors create problems for the educational profession in its attempt to deal with significant numbers of students who drop out of school. One of these factors is addressed in this study, that of overage students. There is a large and dynamic body of evidence that overage students constitute a group in danger of failing to complete appropriate academic programs. Further, there is substantial evidence overage students leave school prior to graduation at a far greater rate than their classmates who are the appropriate (modal) ages for their grades.

Students in all parts of this country are identified as at-risk for educational, and often, life failure. While public schools are not the proper arena for social solution strategies, they do control some of the variables influencing school success. One such variable is in-grade retention, a common educational strategy for dealing with students at-risk. This study explores the phenomenon of overage students in two dimensions: those who are overage for grade placement due to in-grade retention and those who are overage for grade due to other causes. The research

hypothesis of this study was that there will be no significant differences between or within these two groups of students with respect to selected academic and demographic factors.

BACKGROUND

Preparation of students for meaningful participation in a rapidly changing society taxes our resources to their limits. The problems faced by the American educational system are indeed staggering. To the extent we fail to educate students adequately, our schools will reflect this failure in the quality of students' lives as well as their places in the larger global society. The position of America in the society of the future, both economically and in terms of influence, is directly related to the quality of the education provided by the nations' school systems.

American society cannot easily be separated from its social and political history. Tyack and Hansot (1982) in their volume, Managers of Virtue note the statements of Michael Sadler, an earlier British chronicler of America who observed,

> The American school is radiant with a belief in its mission, and it works among people who believe in the reality of its influence, in the necessity of its labors, and the grandeur of its task. (p. 3)

The authors continue, stating:

> Americans have long had faith in the power of education to shape the future, and took quite

> literally the motto on the Great Seal of the United States, "Novus Ordo Seclorum." (p. 3)

Former Education Secretary William Bennett (1986) cites James Madison who said in 1822, "Knowledge will forever govern ignorance, and a people who mean to be their own governors must arm themselves with the power which knowledge gives" (p. i).

Today's commentators also reflect on the vital importance of education and state their concerns for the process, "The problem . . . is not that schools are less competent than they ever were, but that work is more complex than it ever was" (Raspberry, 1988, p. 3).

Pellicano (1988), however, takes a less sanguine view and fears a rise in the degree of global threat which may exist with poorly educated students.

> We perceive them [students] as being at risk of becoming unproductive, underdeveloped, and uncompetitive or becoming a domestic Third World. Concomitantly, they place society at risk of becoming a Third World inhabited by individuals uncompetitive, and unresponsive to market forces. (p. 47)

Butler (1989) adds, "If we as a nation do not change the way we deal with children born into poverty, discrimination or neglect, we will face the uncertainty of a permanent and growing underclass" (p. 50). These statements should cause examination of more specific factors leading to the expression of these concerns.

This study examines the relationship of age and in-grade retentions as variables in school success. Chapter II will detail evidence within the literature documenting that students older than the modal ages for their grades are much less likely to complete courses of study leading to high school exit documents of any kind. There are a limited number of reasons for students being overage for their grades, e.g., legal entrance dates and the students' birthdays may have resulted in a year's delay in enrollment, parents may have decided to keep them home an extra year, or students may have repeated a grade. Some may also have begun school in a setting with different legal requirements. A few may have been confined to home or hospital and were thus unable to begin school with their age peers. However, the latter occurrences are infrequent and do not account for a sizable proportion of older students. In-grade retentions account for the vast majority of students above the modal age for grade.

Unfortunately, little distinction is seen in the research literature between those who have been retained, and thus overage for their grades, and those who are overage for other reasons. This study makes that distinction and focuses on a sample of 127 student subjects. Student performance is examined to determine if achievement differs between the cohort members who were not retained, but are

still overage, and those students intentionally held back for a second year in the same grade.

RATIONALE

Smith and Shepard (1987) note United States school systems retain 19 percent of their students, a figure exceeded only by Haiti and Sierra Leone. In contrast, Japan retains less than 1% (p. 129). These figures may be influenced by varying cultural mores e.g., Japan's norm for group solidarity as opposed to our individualistic cultural set may result in more effort exerted by the Japanese to keep age cohorts together as they proceed through school. Nevertheless, the reality is that our country retains large numbers of students with the intention of improving subsequent performance while most other nations do not. A need to review the status of all overage students and their achievement may be indicated by this study's findings, whether their age-for-grade is a result of in-grade retention or other factors. If there are no differences between the students who are overage and not retained and those who are overage due to retention, implications for educational practice may result, particularly for the groups of overage students whose late entry is the result of intentional late starts on the part of parents or educators. These later enrollments are influenced by some parents and

educators who believe this practice will place their children at an educational advantage.

Many who describe and examine the phenomenon of school failure note attributes frequently associated with those failing to complete school. As will be seen in Chapter II, most mention economic disadvantage and overage as factors occurring often among students who drop out of school.

Schools have little or no direct influence on the economic condition of their students. However, public schools have everything to say about grade placement policies. It would seem that efforts should be made to influence policies of this nature which may advantage students and their academic progress.

Educational practice improves or fails to improve based on two major forces, one in which decision-making is based on personal or group experience, and the other in which decision-making is based on current and reliable information. If this study clearly distinguishes the results of the two conditions (retention and non-retention) of the subjects, the capacity to make decisions based on data and current evidence may be used to help students who may be at-risk for academic failure.

Each year one million students fail to complete high school (Dougherty, 1987; Butler, 1987). Under the provisions of the Hawkins-Stafford Educational Amendments of

1988, the first annual report on dropouts was given to Congress on the fifth of September, 1988 noting that:

> While blacks still make up 28% of the dropouts, 66% of those dropouts are white. Hispanics comprise 16% of the early leavers. However, the gap between the numbers of black students and their white counterparts is narrowing. (Education Week, 1988, p. 3)

While the school failure rate among black and Hispanic student is greater than that for whites (Dougherty, 1987), improvement in the rates of blacks and Hispanics is seen while white student dropout rates have not significantly improved. Males 23-34 who dropped out of school cost the Federal government seventy-one billion dollars and state governments twenty-four billion dollars in lost income, three billion dollars in extra welfare support, two hundred-forty thousand dollars in loss per dropout through loss of tax revenue, and increased welfare payments totaling twenty billion dollars for each class (Dougherty, 1987). In the same year Butler (1989) stated that two hundred-forty billion dollars was spent on the education of dropouts.

Ogden and Germinario (1988) state that suicide among adolescents has increased 140 percent, homicides committed by teenagers is up 232 percent, juvenile delinquency has risen 131 percent, and the illegitimate birth rate is up 141 percent since 1976.

Ogden and Germinario contend that the phenomenon of school failure is both a symptom and a result of systemic failures of greater magnitude. Further, educators' beliefs

about American family organization may also be flawed. Educators and their institutions attempt to conduct schools as though nothing in society has changed since the Great Depression.

> The length of the school day, the school calendar, the scheduling of parent-teacher conferences, special events and programs, and procedures for dealing with sick children, extra-curricular activities, and parental involvement expectations are designed to suit the family with a full-time, stay-at-home mother. (Lindner, 1987, p. 12)

Frequently, communications to parents assume homes with parents whose value systems reflect those of the school staff, where education is highly valued and parents see the school as a positive force in their lives. More typically, both parents work outside of the home as their children proceed through 12 years of school. Their children are in school while schools continue to arrange activities as though their parent clientele has the freedom to arrange their work schedules to meet those of the school. Further, with the ethnocentrism of most bureaucratic systems, change in schools does not come quickly or without considerable turmoil. Additionally, it takes little time for an institution to become out of touch with its constituencies.

Parents' lack of involvement in schools is often viewed as symptomatic of disinterest while the traditional flow of information remains primarily one of school to home. Schools often expect families to initiate contact with schools. When parents do not take that initial step, they

may be seen as uninterested in their childrens' progress. As a result, concerns regarding children may not be addressed jointly by educators and parents. Parents may be seen as uncooperative when that may not be the case. We may have Theory X schools in a Theory Y culture when Z models may be most appropriate. Many families live on the edge of existence and often cannot afford the loss of wages consequent to school visits. They often have jobs with working hours making it difficult or impossible to take active roles in the school lives of their children.

> The vast majority of parents want to help their children and value education as a necessary tool for their childrens' advancement. However, some parents may be unable to help for a variety of reasons: economic, time, child care, etc. (Haley, Berry, & Hergert, 1988, not paginated)

School value systems may also be at great variance with those of enrolled families. To the extent this is true, schools may be distanced even further from their constituencies. Homes of many students are barely functional. These children of chaos arrive at schools where educators presume they will learn best and be most comfortable and eager to learn in atmospheres reflecting order, quiet, calm, and structure. These children are often accustomed to settings that many educators would be likely to characterize as disorganized and tumultuous.

Another assumption that persists is that teachers are as well informed about their students as they have been in the past. The Education of the Handicapped Act of 1974

(August 21) 88.STAT.580 (one of those provisions is more commonly known as the Buckley Family Privacy Act, PL 93-380) mandates that student records be kept in accordance with this law. Previously, many teachers kept cumulative records in their custody, consulting them at least occasionally. Buckley has been interpreted by many states to mean records should be removed from the teacher's hands and kept elsewhere (PL 93-380, ORS 336.185-215), typically school vaults and filing cabinets. As records become less accessible to teachers, much of their worth is lost.

> Student records should be kept in a location where someone familiar with the local board's policy and appropriate laws on student access can control access . . . a copy of the permanent record shall be kept in a safe, vault, or file a minimum one-hour fire-safe rating." (Student Records, Suggested Guidelines for School Districts, 1989, p. 7) PL 93-380, ORS 336.185-215, ORS 343.500(1)(d), OAR 581-22-717(3) (4)

Thus, at a time when teachers need to know even more about their students, they may have less information, as well as a diminished sense of responsibility.

When students remained in one area for all or most of their school years, information was more accessible to teachers. With increased family mobility and transience, systems for transmitting student histories have become even more important time.

Today, systems meant to account for students' school years may have the effects of inadvertently limiting information about students as well as professional access to

this information. It is increasingly rare for students in most communities to attend schools even within the same system from kindergarten through graduation.

> Geography is destiny for millions of American children . . . where they live affects profoundly both the quality of the education they receive and the lessons they learn -- middle class children are impoverished as well. (Glenn, 1987, p. 205)

For example, a student may enroll in a school which then requests records from the school the student previously attended. That school is unable to send the records requested because they never received them from other schools the student may have attended in past years. This pattern may reach back to seven, eight, or more schools. Consequently educators often know little relevant educational history, including information as to in-grade retention and other scholastic experiences regarding the student.

When students enroll in school, placement is most frequently made based on information provided by the person enrolling the child. Lack of capacity to confirm this information, coupled with a lack of the sense of ownership for educational records, results in many students being placed in grade assignments for which they are overage. In-grade retentions in previous schools are likely to remain in place if no remediative action is taken.

Given that nineteen percent of students are retained annually (Shepard & Smith, 1987), to which should be added

the figure resulting when years of retention are considered cumulatively, the figure of nineteen percent is a conservative one. This figure (19%) also does not include students who are overage but were not retained.

LIMITATIONS

One must be cognizant of limitations which may be inherent in the design of any study. Surfacing these concerns at the outset of this study is seen as a means to caution readers in advance as to areas which may be flawed. However, for the most part, these are inherent in any process reliant on accurate record keeping and for which responsibility is diffuse and non-specific.

Threats to internal validity such as history, maturation, effects of testing, statistical regression, and selection-maturation were not apparent in this study. The threat to validity of experimental mortality, however, is evident in the data set. Missing elements and incomplete records on some students who left the District between the original selection of subjects and individual record inspection caused the study to be reduced in scope and size.

This research was conducted on a sample of 127 fifth, sixth, and seventh grade students in a suburban community which is largely white and middle-class. Consequently, it may not be replicable with total congruence in other settings. Further, it may not have ideal application in

urban and rural settings or with students not members of mainstream culture.

This study did not address the question of whether school failure is caused by overage or merely associated with factors or influences already predisposing students to school failure e.g., low academic performance, excessive absence, etc. Thus, it is not possible to unequivocally infer a cause and effect relationship between overage status and school failure.

Data concerning students and their histories were imperfect. Some information was unavailable due to omissions and incomplete data from cumulative record folders. Further, these data were generated by many people with varying degrees of precision and accuracy.

Academic indicators vary with the grade level of the study's subjects. Consequently, the results were found in myriad forms, dependent on grade levels. Tests were administered in such a way that comparisons were weakened. It was very difficult to track the performance of individual students. As a result, the criterion referenced measures which could be compared were used as a basis of comparison. The district standard for demonstration of adequate performance was 80 percent correct for each test administered.

It was necessary to establish an arbitrary definition of "overage" to define the subject population. This was

done by constructing a band of time between the first day students would have been ineligible in a given year to the last day before the next year's school opening. For example, when the last permissible birthday for entrance was November 15th, November 16th became the first day delineating overage and November 14th of the following year became the last day on which a birthday could occur and still permit entrance to school that year. Consequently a range from the "most overage" to the "least overage" exists for each school year represented in the study. Establishment of a band of time was necessary to establish perimeters for selection of subjects for this study.

DEFINITIONS OF TERMS

A number of terms used in this study require specialized definitions. These appear below:

At-risk. In this study the term is used to denote students at risk of failure to complete an appropriate academic program. This term came to its present prominence with the publication of A Nation At Risk. The generic term "at-risk" has come to mean students who, for a variety of reasons; economic, intellectual, physical, psychologic and sociologic are unlikely to realize their economic or personal potential in their lives. In addition, the effects of racial, gender, and ethnic biases may further exacerbate their at-risk status.

Academic Retention. This refers to the practice of holding a student in the same grade for another year for reasons of academic incompetence.

Modal Age. This term refers to the age which most frequently occurs in a given grade. For example, most students in grade one are six, at grade seven, twelve, etc.

Overage. This term is used to identify students whose birthdays fall in the band of dates established for the study. (The bands of dates are on page 55.) Oregon students now in grades K-12 entered school under three different legal dates; November 15th, September 15th, and September 1st. To enter kindergarten this year, one must have attained the age of five by September first.

Cumulative Record. This term refers to the set of basic information about students' school and academic histories, as well as records of immunization, picture records, attendance, and other information LEAs (local education agencies) may find necessary. Three sets of laws govern contents of and access to student records. These statutes and administrative rules are PL 93-380 Education of the Handicapped Act of 1974 (August 21) 88.STAT.580, the administrative rules contained in PL 94-142 Education of All Handicapped Children Act of 1975 (November 29) 89.STAT.773 and Oregon statutes as cited earlier. Oregon citations are 45 CFR, 121 a.500, ORS 343.163, ORS 343.173, and OAR 581-15-075. It should be noted that these statutes and

administrative rules, while addressing student records and how they are maintained, are not uniform with respect to all provisions. For example, the age at which students may allow or deny permission for their own assessments differs, and in the case of students designated as handicapped under PL 94-142, serious questions in regard to the best interests of the students themselves arise. Differences in the statutes and rules also present ethical and legal difficulties to those working directly with student records.

Early Leaver. This term is sometimes used in the literature and school district policies to describe students who leave school (drop out) for any reason except death before completing an educational program.

Grade Repetition. This is another name for the term, "retention".

PL 94-142. Public Law 94-142, Education of All Handicapped Children Act of 1975 (November 29) 89.STAT.773, guaranteed a free, appropriate, public education to all children aged three to twenty-one irrespective of handicapping condition.

Certify as Eligible. This means a student has met the criteria established in PL 94-142 with respect to a handicapping condition defined in that law. The most frequent certifications seen in typical school populations are those of Learning Disability and Speech or Language

Impairments. The great majority of children named as handicapped are very mildly handicapped.

Cloze. This is a technique for assessing reading comprehension in which student readers replace missing words in sentences or passages. These replacements are made based on the student's understanding of the whole sentence or passage in which the missing words occur.

Academic Indicators of At-risk Performance. This study bases its conclusion as to academic performance on student achievement in reading, mathematics and frequency of absence as academic indicators of at-risk performance. Scores on Criterion Reference Tests falling below the District criterion of 80% indicate students receiving those scores are at-risk for academic failure. Frequent absence is also often expressed as a correlate of school failure. A standard of more than 10 days absence in an academic year is considered excessive.

Absence. For purposes of this study absence is defined as the total number days students were not in attendance at school during the 1988-89 school year.The absence records used in this study were obtained for research subjects in the same year as the other data were gathered. Data were gathered with respect to the frequency of absence of all students in the grades studied through the local Education Service District supplying daily attendance records for all students.

PURPOSE OF THE STUDY

The purpose of this study was to compare elementary students who were overage due to retention with those who were overage for other reasons on both at-risk academic indicators and demographic factors. The following primary, secondary and demographic null hypotheses were investigated in this study.

DATA ANALYSIS HYPOTHESES

The primary, secondary, and demographic hypotheses have been formulated as follows:

Primary Hypothesis

There will be no significant differences within groups between overage students who have been retained and those who have not been retained on academic indicators of at-risk performance.

Secondary Hypothesis. There will be no significant differences across grades five, six, and seven, between overage students who have been retained and those who have not been retained on academic indicators of at-risk performance.

Demographic Hypothesis

There will be no significant differences between overage students who have been retained and those who have not been retained with respect to gender, minority group

membership, participation in Federal free and reduced meal plans, or designation as handicapped under the provisions of PL 94-142.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter consists of a review of the literature concerning the dimensions of the dropout problem; at-risk students and their characteristics, research on retention and overage students, the practice of retention and the social and economic results of retaining students in-grade.

The literature on the subject of at-risk youth is found within a wide variety of source materials. While there are relatively few books on the subject of at-risk youth, there are numerous periodical listings. Both federal and state governments have established task forces and commissions which have published their findings. In addition, there have been a number of theses and dissertations as well as private seminars and meetings focusing on the plight of the dropout student in this culture and economy. It also should be noted that information about dropouts as well as in-grade retention is increasing rapidly. A move to study the effects of retention policies stemming from adoption of higher standards for promotion and resulting from actions taken after the publication of, A Nation At Risk appears to be gathering momentum. It has taken a number of years for the results of establishing promotional barriers and more

difficult achievement policies to begin appearing in the literature.

The chapter is organized as follows: section one, information as to the cause and effects of the problem of at-risk youth; section two, definitions of the term "at-risk"; section three, literature describing characteristics of students likely to become "early leavers" in terms of attributes within the locus of control of the school or those which are beyond its scope of authority and influence; section four, attention to literature focusing on grade repetition as an educational practice and intervention (this section was constructed to showcase the realities of retention as an option for underachieving students) and section five, a review of the literature dealing with overage students for grade as a correlate of school failure.

DROPPING OUT: CAUSES AND EFFECTS

As one studies the phenomenon of school failure in the twentieth century, historical perspective is essential. On the whole, the educational experiment of the American public schools has met with remarkable success accomplishing in its first mission, basic education for all. The "all" has been amended to include the handicapped with the advent of PL 94-142 in 1975. This law shows every indication of becoming one assuring educational opportunity and protection for children from birth onward.

Our nation made an intentional decision to provide a free public education to all its citizens. The common school movement swept across this country and culminated in the establishment of a public school system open to all students. Plessy v. Ferguson (1896) established a legal precedent supporting segregation of the races in "separate but equal" schools. The case had its foundation in the acceptance of an obligation to educate all children. Black, white, wealthy, poor, agrarian, and urban children were included in this exercise in applied democracy. With Brown v. Topeka (1954) the discriminatory practice of separate schooling for black and white students was forbidden. This decision headed the American public school down a somewhat different path which was further defined by PL 94-142 (89.STAT.773).

The constituency of American schools today includes all children, handicapped and non handicapped. Furthermore, they are to be educated to the maximum extent possible; this is a significant departure from the original mission of the comprehensive American public school system which strived for basic literacy alone. In 1900, only 20 percent of the potential student body ever entered high school. Six percent of those graduated. In the 1920s, only half began secondary education, and in 1950, 41 percent dropped out. Presently, between 25 and 30 percent of students nationwide leave school prior to completion of a program (Steiner,

1986). In theory then, progress is being made toward the goal of national literacy. Other nations have embraced the goal of literacy, setting it as a national priority. They have made educational decisions and policies putting them far ahead of America in terms of technology and scientific progress. Our nation still looks to its public schools, however, for its physicians and statesmen, ministers and educators, astronauts and attorneys, musicians and artists. To a great extent, the public schools have supplied the demand.

However, the public schools of today do not enjoy universal support. Education rests on the shifting sands of public and political opinion, subject to the vagaries of public policy decisions balancing "guns and butter", inner city problems, and pleas for the sick, the elderly, the dispossessed, and the homeless.

Butler (1989) states:

> If we as a nation do not change the way we deal with children born into poverty, discrimination, or neglect, the United States will face the certainty of a permanent and growing underclass. (p. 50)

Hahn, Danzberger and Lefkowitz (1989) state:

> For the past decade, the nation's education system has been buffeted by frequent shifts in priorities. Raise academic requirements in middle-class schools, but simultaneously expect poorly-prepared, defeated students in neglected inner-city schools to respond to more demanding standards. Improve teacher competence in affluent areas, but offer no concurrent inducement to those who teach in the most trying circumstances. Diminish federal involvement in

> public education, reduce revenues at the local level, and yet expect students and teachers to excel. (p. 66)

Within these realities one must look at the system as it is, attempting to influence both policy and practice for the common good. All will suffer if the educational systems in this country experience malaise and perhaps a terminal case of uncertainty.

"Students are being disconnected from the function of society, not just from economic productivity but from the function of citizens in a democracy" (Barr, 1988, p. 3). If failing systems are replaced with successful and dynamic ones, if practices guaranteeing failure can be replaced with ones insuring educational success, our society will profit.

Cuervo, Lees and Lacey (1984) believed the one-room schoolhouse of former days is not recalled accurately. As they stated:

> The school played a key role in society, but it was not such a lonely role and there was not as much pressure on the school to produce responsible and affective citizens as there is today. (p. 31)

As noted in Chapter I, the difficulty of the task has been compounded. In addition, the outer world itself has become unimaginably complex. Bernick (1986) phrased it accurately:

> A generation ago, people with limited literacy skills in urban areas could find jobs in manufacturing or on the docks. Those days are gone forever, as the U.S. economy completes the transformation from a manufacturing-based economy to a service and information-based

> economy, skill in writing and reading is at a premium (p. 365).

Fuchs (1988), in an editorial in Education Week, sees children as a national resource and a public good.

> If Americans do not have enough children . . . and if children do not become healthy, well-educated adults, the country's future is bleak, regardless of progress with other issues. (p. 38)

Lieberman (1988) noted that failure in school may be tantamount to failure in life because school is the common experience to us all providing grounding in self-esteem, confidence in ourselves and experience with traditional education in basic education. Further, he states:

> School failure may render an individual incapable of responding to almost any choice . . . it is preventable or at least avoidable in most cases . . . to think otherwise is to presuppose that the power and responsibility for success in school resides totally within the student. (p. 13)

Jackson and Hornbeck (1989) speak of restructuring the middle schools of our country. Jackson and Hornbeck see them as pivotal in keeping students engaged in the educative process.

> Yet tragically our society has tolerated poor achievement by poor and minority students because their numbers were relatively small compared to the numbers of white students. They were, in essence, throwaway children. (p. 832)

Lincoln and Smith (1989) as well as Butler (1989) note the one million students who drop out every year resulting in a cost of 240 million dollars in lost wages and taxes.

Kenneth Clark (cited in Lincoln & Smith, 1989) writer of the foreword to America's Hope, America's Shame, states:

> A society which continues to erect excuses for abiding the educational inferiority of less privileged young people is perpetuating the pattern of at-risk youth and the fundamental risks of society as a whole (p. iii).

Pressiessen (1988) compares the gap between the rich and poor as perhaps greater than that in Victoria's England when Disraeli feared for the future of the Empire.

> The expectations set for students who must prepare to live in a competitive and interdependent world may require a transformation no less miraculous than the metamorphosis . . . between Henry Higgins and Eliza Doolittle . . . . Frequently these youngsters are members of a minority group, they are racially, linguistically, or socially partitioned from the members of the mainstream culture. They are a vulnerable underbelly of a complex, sometimes callous and naive society. (p. 11)

The following demographics are illustrative of the realities few wish to see. Postman (1987) believes that the changes of the Industrial Revolution pale beside those occurring at the present time.

> Of every 100 children born in Oregon, 12 were born out of wedlock; 40 to parents who will divorce, 41 will reach 18 "normally." In 1986 only four percent of families have two parents with a father in the workplace and a mother at home with the children (not paginated).

The rhetoric of excellence has surrounded us for nearly a decade while the current reform movement has touched every part of our society. This movement has encompassed all areas of public education, elementary,

middle school, high schools, colleges, and universities. Every segment of our society has taken part in creating the mood and mandate for change.

Many call for a shift to a new paradigm. The futurist, Barker (1987) posits that new paradigms are created or discovered while the ones which they are to replace are still functioning. He notes that too strong a belief in a paradigm may create paradigm paralysis.

> This is called paradigm effect and explains why two people can look exactly in the same direction and see very different things (not paginated).

Schlecty (1988) phrases it in yet another form, "It is becoming increasingly clear that nothing short of fundamental restructuring will suffice . . ." (not paginated), while Timar and Kirp (1985) support the proposition that a major shift in public policy needs to occur (p. 510).

Roberts (1988), in Electronic Learning, suggests that schools have become the scapegoat for all of society's ills even though society itself cannot solve the strains in our society which have come about because of language barriers, increased numbers of refugees, and increasing numbers of Americans who are homeless and hopeless.

> One-half million students beginning school live in poverty, fifteen percent are mentally or physically handicapped, fifteen percent are immigrants whose native language is other than English, and fourteen percent who are children of unmarried parents. (p. 33)

Garman and Brown (1989) state that one in ten teenage girls gave birth to a child, further, they continue that ten thousand American girls have babies before they are fourteen and about one-fifth of those have a second child within two years. Lally and Mangione (1989) saw a connection between these figures and the one million homeless children in the United States who receive no pre-school or after-school care.

Many writers, among them Peng (1986), note that the dropout rate for whites is rising at the same time as the rate for blacks is decreasing. He further notes that of a given cohort, one in ten will fail to receive a diploma. Cibulka (1986) makes a similar observation in regard to the declining school completion rate for white students.

Ironically, the very measures designed to ameliorate these problems have themselves created new difficulties. We also find it difficult to deploy those resources to places most in need of them.

The Oregon Association for Supervision and Curriculum Development focused its efforts in 1988 on the issue of at-risk students. Proceedings from a meeting of the Northwest Regional Educational Laboratory (1988), were cited in the OASCD publication, "The Bridge".

> Students are being disconnected from the function of society, not just from economic productivity but from the functions of citizens in a democracy. (Barr, 1988, p. 3)

The publication of A Nation At Risk in 1983 became a catalyst for reform with the legitimacy the distinguished panel brought to the problems of contemporary education. New and even more vocal cries are heard demanding academic excellence, a reaffirmation of rigorous academic standards and the establishment of promotional gates as academic safeguards have failed to benefit the academically and socially at-risk students. Indeed, the raising of standards paradoxically may hurt the very populations targeted for assistance. An unintended byproduct of the excellence movement may be the creation of students not only achieving at the high levels demanded with higher standards, but groups of students who are even less able to meet these standards. As Fetler (1988) notes, the traditionally high-achieving students may continue to achieve at high levels while those incapable of high level performance may be in even a worse state than before the reform movement descended on American education.

In addition, higher attainment may come at the expense of the lower achieving students.

Lewis (1988) noted:

> Researchers at Johns Hopkins University found, for example, that raising standards tends to benefit those students who already perform well but doesn't seem to make a difference for students who perform poorly. (p. 252)

DEFINING THE DROPOUT POPULATION

Definitions of dropouts and descriptions of their characteristics are crucial. As long as communities fail to accept ownership or confine the problem to minority groups or the poor, the strategies attempted will surely fail.

In the author's survey of the literature, divisions appear among the factors associated with failure to complete an appropriate educational program. The locus of control of some resides within the school while the existence of others is rooted in factors external to the school. This distinction is pivotal to the entire study. We must assess our capacity to act on the variables contributing to school failure and over which schools have at least a modicum of control. Sources of school failure outside the direct control of the schools are far less likely to be amenable to school-based actions or solutions.

School-based variables cited multiple times in the literature as correlatives of school failure are: attendance problems; poor grades; problems with school structure, e.g., conflict with teachers and administrators; school rules and discipline; membership in the special education population; the experience of in-grade retention; and the condition of being overage relative to one's grade peers. Retention is also frequently cited as a variable associated with student failure.

Variables associated with school failure with an out-of-school focus were poverty, family problems or responsibilities, self-concept, a belief enough education had been acquired, pregnancy, and marriage.

At-risk students, then, are defined as those who are in danger of failing to complete appropriate educational programs as determined by comparison with selected at-risk indicators.

CHARACTERISTICS OF DROPOUTS

Following is a literature-based discussion of the characteristics noted in the previous pages of this Chapter. This section will be followed by literature focusing on in-grade retention as a variable associated with school failure.

Matrayna and Mitchell (1986), note that thirty-five percent of all Western Region students fail to complete high school. In the same publication, data are cited characterizing the at-risk population with the following descriptors: they have low or failing grades; have low test scores; are placed in remedial track programs; are bored or apathetic about school; are chronically truant; are overage for grade; have in-school delinquency records; have parents who failed to complete high school; have serious familial or financial problems; live in homes headed by a single parent; are members of minority groups or are foreign born;

experience social isolation; suffer from lack of academic self-esteem; have low educational and occupational aspirations; and become pregnant (p. 4).

Barber and McClellan (1987) speaking of at-risk students, reported attendance problems, disinterest in school, boredom, poor academic records, problems with teachers, family problems and responsibilities, dislike of particular courses, financial problems, overage, military service, or a belief sufficient education had been obtained.

Frymier (1988) reports on the 1980 U. S. Census showed graphically that the dropout rates for blacks and white females have increased while the figures for white and Hispanic males have decreased.

Robinson (1988) urged concern for students who are behaviorally disruptive; those frequently absent; passive students; those who show low performance; those who are suicidal; overachieving students or those who are hyperactive.

Hess and Greer (1986) stated that Chicago Hispanic students were the most likely to become early leavers, while educators in Springfield, Oregon saw other factors associated with dropping out: beginning school with few readiness skills; peer problems; low academic productivity; frequent absences; living in homes where education is a low priority; possessing low self-confidence; low socio-economic status; having little sense of personal competence and a

distrust of adults. Hahn et al. (1989) drew upon other research to note the following major risk factors associated with the decision to drop out: dropping back a grade level, experiencing poor academic performance, being assigned repeated detentions and suspensions, becoming pregnant, being learning disabled and suffering from stress.

The State of Texas has established guidelines for identifying at-risk youth: Those seen at-risk for school failure are students who have been retained one or more times, are two or more years below grade level in reading and math, have failed at least two courses for one or more semesters, and have failed one or more sections of the Texas State Achievement Examination (Texas Educational Agency, 1980).

Lehr and Harris (1988) list academic difficulty, inattentiveness, distractibility, lack of environmental structure, lack of social skills, inability to face pressure, and fear of failure as associated with early school leaving.

The Eugene, Oregon, School District (1988) noted academic skill problems, fragile family conditions, economic disadvantage, involvement with the law, low self-esteem, negative attitudes toward school, low social competence and skills. They also listed substance abuse, high mobility, and qualifications for special education or programs for the gifted as factors seen in dropouts. Others note the same

descriptors as above with a particular focus on the retainee, the overage, and the truant student.

Some researchers caution that terms like "at-risk" only identify problems that might exist. Identification must be followed by a search for exact causes of the risk behavior followed by specific remediation. They also note the difficulty educators have in persuading teachers to stop behaviors demonstrated to have harmful effects e.g., grading and ranking systems (Hoover, 1989; Howard, 1988).

Slavin and Madden (1989) state:

> Risk factors include low achievement, retention in grade, behavior problems, poor attendance, low socioeconomic status, and attending school with large numbers of poor students. (p. 4)

They note we can predict with accuracy students likely to drop out early in their school careers. They stress that 20 percent of students are retained in some urban districts.

Dougherty, McGuire and Palaich (1987) add underachievers, migrant workers, alienated and unconnected youth to the list of potential early leavers, while an Oregon Department of Education publication (Olson, 1987, not paginated), looks at graduates, 90% of whom only attended one high school in contrast to 40% of leavers with the same school profile.

In summary, it appears factors associated with failure to complete an appropriate school program are well documented and are reflected in data gathered by many researchers in numerous settings over many years. These

data corroborate one another and make two things quite clear: first, many of the factors defining at-risk students are sociologically and environmentally based, exist in the out-of-school world, and do not lend themselves to educational solutions. Second, it is equally true many of the factors cited are generated within the context of the school, and most importantly, are within the decision-making purview of the school.

RETENTION AS AN EDUCATIONAL PRACTICE

The first documented and systematic examination of retention was in the publication of Laggards in our Schools. The author believed retention was an inappropriate intervention.

> But if the function of the common school is, as the author believes, to furnish an elementary education to the maximum number of students . . . that school is best which regularly promotes and finally graduates the largest percentage of its students (Ayres, 1909, p. 199).

Historically,

> When the common school systems were established in the United States, merit promotions were the rule . . . this promotional system was geared toward the need of the city's best students; average students were unlikely to seek admission to the high schools . . . retention was common . . . promotion was perceived as an extraordinary personal achievement (Labaree, 1984, p. 68).

In 1907 Philadelphia spent almost $900,000 to educate repeaters. That sum represented almost twenty percent of

the school budget (Labaree, 1984). Rafoth, Dawson and Carey (1988) state:

> Retention was so common during this period that it has been estimated that approximately every other child was retained at least once during their first eight years.

They continue:

> Most recent reviewers of the literature on retention effects have concluded that retention shows no clear benefits for students in terms of academic gains, personal social growth, or improvements in attitudes toward school . . . research reveals in this supportive document that retention is a costly and largely ineffective way to deal with academic failure. (not paginated)

In the meta-analysis of 150 studies on retention, then U. S. Commissioner of Education Gregg Jackson (1975) concluded:

> There is no reliable body of evidence to indicate that grade retention is more beneficial than grade promotion for students with serious academic or adjustment difficulties . . . thus, those educators who retain pupils in a grade do so without valid research to indicate that such treatment will provide greater benefits to students . . . than will promotion to the next grade. (p. 627)

Smith and Shepard (1987) note supporters of retention have beliefs they labeled, "nativist".

> These teachers viewed development as a physiological unfolding in a series of stages, governed by an internal timetable. (p. 130)

Louise Bates Ames (1981), director of the Gesell Institute, however, believes retention, properly handled, does not damage a child emotionally, and can be a positive experience (p. 31).

Smith and Shepard (1987) continue:

> The body of evidence addressing this assumption [retention leads to increased achievement,] however, is almost uniformly negative . . . indeed few collections of educational research are so unequivocal . . . pupils who are retained pay with a year of their lives . . . retention is one part of the current reform package that does not work. (p. 130)

Hess and Greer's study (1986) in the Chicago School System found that even if students were to gain a whole stanine through retention they would still be more likely to drop out than would peers entering high school at normal ages with lower reading scores. Thus, it would appear a tougher retention policy, even if successful in raising reading scores, is likely to increase the number of students dropping out.

Lindelow (1982) however, states:

> Students have been shown to benefit from retention if 1) their rate of progress was less than half the normal rate and 2) if they were achieving at normal rates, but were immature in early grades. (p. 472)

A recent article in "NEA Today" posited the following view of retention:

> Social promotion traps children in humiliation. Failure is an everyday experience that reminds them of their inability to measure up to their peers or to satisfy their teachers and parents. The resulting frustration does nothing to inspire learning of or cause a healthy self-concept to develop (Granucci and Granucci, 1982, p. 31).
>
> We anticipate that as many as fifty percent of our students may take four years to complete an education that traditionally requires three years (Jennings, Burge, & Sitek, 1987, p. 22).

Ebel (1980) suggests a behaviorist approach when he states that retention may be an appropriate measure given the view of motivation believing organisms work only to avoid negative consequences.

The author has heard the arguments for retention. However, research findings in the field opposing retention are more compelling. Unfortunately, it is beyond the scope of this study to deal with alternatives to retention for those students with academic or social difficulties.

Carstens (1985) provides a summative statement:

> By the third year following retention, such a child is one year below grade level again. Theoretically, if retention were used to correct this gap every time a child fell one year below grade placement, a child would have to be retained seven times to achieve a twelfth grade education. (p. 56)

A multitude of studies and researchers note the ineffectiveness of retention and conclude that even though it has repeatedly been demonstrated as an interventional failure, teachers and administrators persist in retaining students. Many researchers have stated the practice flourishes in the absence of any other interventions which may be appropriate responses when students fail to achieve.

Johnson (1984) summarized the prevailing opinion of educational researchers. He believed that using retention to enforce teacher accountability by keeping their students in the same grade a second time seems to ignore the obvious

connection between effective instruction and student learning. He notes,

> Further, it tends to blame the child for failing and too easily absolves the school of responsibility for identifying alternatives to retention. (p. 68)

Lieberman (1986) notes:

> Non-promotion may be a way to preserve integrity in the system, but that integrity can only exist if the system tries to meet the needs of the individual. (p. 4).

> Let us not mince words, we see little justification for retention or for programs that add a year to a pupil's career in school . . . the achievement and adjustment of retained children are not better (Smith and Shepard, 1987, p. 131).

An obvious byproduct of retention is a separation of the retainee from age peers. It is not as obvious, however, if effects from retention are the same as the consequences of being overage in grade for some other reason, as noted in Chapter I. Stephenson (1985), in a Dade County, Florida Report, noted that students progressing at the typical pace have a much lower dropout rate than those who are older due to retention.

> Birth year has a strong relationship with dropout rate. More than one half of the cohort of dropouts have probably been retained one or more years . . . [they] have an overall dropout rate of about one half of that characteristic of the students born one year earlier. (not paginated)

In this study the author cannot entirely clarify all the reasons for the overage status of all subjects. There appears to be a presumption that retention is the sole

reason for this status. This is the point on which this study turns. How are students overage as a result of retention performing compared to their similarly overage non-retained peers? How are the retained overage students performing compared to their grade peers who are also overage, but not as a result of retention.

> There are no criteria to predict which children may possibly benefit [from retention.] The real pity in the process of nonpromotion is that it is not the adults who are taking the "road less traveled by" but defenseless students forced down that lonely, desolate, debilitating, dead-end road (Koons, 1977, p. 702).

Sklarz (1989) reminds us:

> One of every four first graders is in danger of being retained, which means twenty-five percent of our students are at risk in their first year . . . if schools wait until middle school or high school to make the bid to save the at-risk child, they will be too late. (p. 34)

OVERAGE AS A CORRELATE OF SCHOOL FAILURE

When reading the literature concerning the overage student, a caveat is in order. For the most part, there are no distinctions made between retained students who are older and students also older than grade peers but who were not retained. Consequently, the reader must view the literature with a certain degree of caution.

> Prolongation of school age is not in itself a blessing, but may even be a curse to civilization unless there goes together with the prolongation a revolutionary rethinking and restructuring of the total program from the secondary school upward. (Woodring, 1989, p. 460)

In a similar vein, Hamack (1987) emphasized that students who are overage when they enter high school are far more likely to drop out. He states, "It is clear that being overage is associated with indicators of other problems with schools" (p. 33).

This author, however, does recognize that retention is not the only reason students may be overage.

> Moreover, except for those students who enter a system overage, students who are held back in elementary or middle school are known to school officials as already having difficulty in school (Hamack, 1987, p. 33).

TABLE I

PERCENT OF OVERAGE STUDENTS BY AGE
1988-1989

Age	Percent of Overage
8	17.2
6	18.8
10	21.0
11	18.9
12	19.5
13	19.8
14	17.1
15	23.0
16	15.6
17	22.3

Table I displays the percentages of student overage for grade.

Medway (1985) saw the situation of retention as a critical one with students and their needs arrayed on one side and a public demanding accountability on the other with student achievement as the standard. He noted, that retentions were effected even with "the knowledge that the curriculum repetition helps only a few students" (p. 25).

A New York City Board of Education (1986) report noted that in the 1984-85 academic year about one-third of the 850,000 general education students were overage. [Implicit to this author is the fact that this number would be much higher if those who are special education students, eligible for education to at least age 21, were included in the count]. Further, this percentage rose with each grade. In addition, a great majority of students in retrieval programs are overage.

Hess and Greer (1986) presented the Chicago study noted earlier. It perhaps most graphically illustrates the educational effects of being overage on students. This study found that overage students who may read better than their modal aged peers were far more likely to drop out of school, thus suggesting to the researchers that there is a correlation between dropping out of school and having been retained earlier. In a finding significant for the evaluation of effects of retention, the study found:

> It has been observed that students with higher reading scores are less likely to drop out. But when overage entrants were compared with normal aged entrants, it was discovered that overage students not only drop out more frequently than do normal aged students reading at the same level, they drop out more frequently than do normal aged students reading at a lower stanine level, thus even if a student were to gain a whole stanine through retention (a condition noted in the study, but of dubious likelihood) he still would be more likely to drop out than would his peers entering high school at normal age with a lower reading score. (p. ii)

They concluded that a tougher retention policy is unlikely per se, to achieve the desired result. Scores are likely to increase the number of students dropping out.

Hahn (1987) also observed that:

> In surveys conducted between 1981 and 1984 in Los Angeles, "overage" was the reason cited by forty-one percent of the dropouts. (p. 259)

Smith and Shepard (1988) added that some parents hold children out for an extra year in the belief this will help them have a running start on the fast track. Further, Smith and Shepard state, "Over the long term, kindergarten retention has a final negative consequence. Children who are overage for their grades have a much greater likelihood of dropping out of school" (p. 36).

SUMMARY

The question addressed through this literature is whether in-grade retention and overage status are in and of themselves the cause of school failure or merely associated with it? This study addresses the question of

whether there is a difference in academic achievement between the two conditions, overage and retained and overage and not retained?

This study will seek to ascertain if academic success differs between the groups of average students using data available concerning the subjects' school histories. These data will then be used to compare the performance of both groups on selected academic indicators as well as through analysis of demographic variables. These analyses will be used to support or refute the working hypothesis stated in Chapter I, that there are no statistically significant differences between students who are overage when those students who are overage due to in-grade retention are compared with those who are also overage but who have not been retained.

Given that many parents elect to keep students out of school an extra year in the belief this will accelerate school progress, studies of this kind would seem to be in order. Ironically some believe a later start is better for children in terms of school success, many early childhood education specialists advocate that children start school even earlier than is the case at the present time.

CHAPTER III

METHODS

GENERAL PLAN OF STUDY

This study, which was conducted in an suburban school district, examined academic achievement and demographic considerations for a group of students in the intermediate grades who are overage for their grades.

These groups were divided into those who were overage due to in-grade retention and those who were overage for some other reason. Data as to their academic achievement, attendance records, and demographic attributes were gathered and comparisons between the groups made.

The academic indicators were scores on criterion referenced tests as well as information as to the frequency of absence the academic year in which these data were gathered. Demographic considerations were gender, ethnicity, federal meal plan participation, and designation as handicapped.

Comparisons were then made between these groups with respect to the data noted above for all overage students in the sample. They were also analyzed in terms of condition, i.e., overage due to retention and overage due to some other cause.

DEMOGRAPHIC HISTORY

The history of the school district dates to the early years of this century. The first class of high school students graduated in 1953, and the highest enrollment was 5700 in 1969. At its population zenith, the district had seven elementary schools, two junior high schools, and one high school. In the 1988-1989 school year there were five elementary schools, one middle school (grades seven and eight), and one high school serving students in grades nine through twelve. In addition, a rural district to the far northwest of the county pays tuition to the district which in turn receives that district's secondary students grades 7 through 12. The district has tenants in buildings no longer used, all of which currently are parochial or private schools.

The district has enjoyed an enviable reputation as a school system of excellence for many years. It was judged by many to be the premiere district in the County for many years. Most District staff members lived in the community, as well as attending schools and churches within the District boundaries. Over time, the district has enjoyed considerable stability characterized by a quarter of a century tenure by one superintendent of schools, and a high median age for teachers (46 years old in 1988). At this time 75% of the teaching staff are at the top of the salary schedule with master's degrees plus 45 additional hours of

graduate credit. In the last few years much has changed in the district. Its propinquity to freeways, casual labor, and transportation routes has attracted a more mobile and transient population. In addition, many Indochinese refugees have become district residents, first as apartment-dwellers, then as renters of low-cost housing. Currently many live in extended families in owner-occupied homes. Many poor families of many ethnic backgrounds live in marginal housing in the district. Motels predating the freeway system have attracted poor families who live in them, often for a number of years. In addition, the motel area has become a haven for prostitution, traffic in drugs and other crimes. Also, land previously used for produce and vegetable growing has been sold and high-occupancy apartments built. These also have attracted low-income tenants often subsidized by Adult and Family Services. There is a new low-income housing project in the district as well. However, these trends have been somewhat tempered by two factors. One, a large tract of homes in the $100,000 and up bracket continues to attract residents who know of the district's reputation and whose incomes enable them to buy homes in the community. Second, the high price of housing in general, has caused many families with young children to buy "starter homes" in areas seen as less desirable in a housing market less inflated than the present one.

Those who work in the district as certified or classified staff members have watched these changes with growing alarm. Many have moved out of the district and commute long distances to school. The district has attempted to mitigate the problems of an aging staff through large investments of time and money for inservice programs and curriculum modifications.

While still perceived as a stronghold of academic excellence by many, the district is suffering the same problems as many districts of similar size. While the annexation of most of the school district into the City boundaries has provided some city services heretofore unavailable, the community perception remains that of a suburban area. It see itself with little affinity with the city. Increasingly, however, the problems of urban society encroach upon the district. The section of tables which follow will illustrate the latter statement.

Table II illustrates the ethnicity of the community in which the study was accomplished. It can be seen the vast majority of the community at-large is comprised of Caucasians. This array, however, is not seen in the schools where the racial and ethnic composition is considerably different (see Table VII).

TABLE II

COMMUNITY ETHNICITY
1988-1989

ETHNIC GROUP	PERCENT
Caucasian	93.7%
Asian	2.1%
(Indochinese, Korean Japanese, Chinese)	
Hispanic	1.4%
Black	1.3%
Native American	.7%
Other	.8%

TABLE III

HOUSEHOLD COMPOSITION INFORMATION
1988-1989

DESCRIPTION OF HOUSEHOLD	PERCENT
Married Couple Family	22.0%
Other (No Children Non Family Household)	76.3%

Table III illustrates the impact community demographic changes may have on schools. It can be seen that the percentage of resident who are people living along or in households without children is nearing 80%. Twenty years ago that figure would much more likely have been see resulting from counting families with children. Further,

the figures illustrate the "Married Couple Family" comprise rather a small percentage of the total residential population.

TABLE IV

COMMUNITY COMPOSITION BY WOMEN AND THEIR CHILDREN 1988-1989

WOMEN AND CHILDREN	NUMBER	PERCENT
Women In The Labor Force With Children Under Six	900	41.0%
Women In the Labor Force Over 16 With Children Between 6-17	1900	67.0%

Table IV illustrates that the numbers of women in the labor force who have children of school age in increasing. It may be noted that the result is that schools are faced with new difficulties which come when no one is at home during the day when children are ill, when parent presence at school is desired or required etc. It is necessary for schools to formulate new responses to this changed condition in terms of family composition and structure.

TABLE V

SOCIO-ECONOMIC DATA WITH RESPECT TO
INCOME AND FEDERAL MEAL PLAN PARTICIPATION
IN THE SCHOOL DISTRICT
1988-1989

	Descriptive Statistic
Median Income	$18,930.00
At Poverty Level	13.9%
Federal Meal Plan	37.0%

It should be noted that it is likely many more students qualify for free and reduced meal plans than those who actually receive them. This is due to perceived stigma, failure to apply, lack of persistence on the part of school staff to pursue eligibility with families in a vigorous manner, etc.

This table illustrates how the district staff is arrayed in terms of ethnicity. It may be seen that the staff composition fails to reflect either the community at-large or the school community in terms of ethnicity.

TABLE VI

SCHOOL DISTRICT STAFF COMPOSITION
GENDER AND ETHNICITY
1988-1989

Position/Ethnicity	Women F.T.E.	Men F.T.E.
Teachers	112.4	62.8
Counselors	7.2	5.0
Administrators	7.0	12.0
Classified	80.7	34.0
Teacher-Asian	1.0	
Classified-Hispanic	1.0	

TABLE VII

ETHNIC DISTRIBUTION BY ETHNIC CODE IN
GRADES 4, 5, AND 6
1988-1989 ACADEMIC YEAR

Ethnic Code Name	Percent
Caucasian	91.9%
Indochinese	1.9%
Other Asians	1.9%
Hispanic	1.6%
Black	4.5%

The table above illustrates how district students were ethnically and racially arrayed during the year in which data was collected for this study. The following table (Table VIII) notes how the minority students are distributed

with respect to the grades of student subjects in this study.

TABLE VIII

MINORITY POPULATION DISTRIBUTION
IN GRADES 5, 6, AND 7
1988-1989 SCHOOL YEAR

Grade	Percent
5	14.0%
6	10.0%
7	10.0%

Rounding out the demographic considerations germane to this study is that of students classified as handicapped under PL 94-142. Table IX below displays the numbers of handicapped students as of December of 1988.

Table IX illustrates the composition of the district's student body in terms of handicapping conditions as certified by the district to the State and Federal governments.

TABLE IX

STUDENTS CERTIFIED AS HANDICAPPED
BY DISABILITY
1988

CODE #	CONDITION	PERCENT
10	Mentally Retarded	10.4%
20	Hard Of Hearing	8.0%
70	Orthopedically Impaired	4.0%
80	Other Health Impaired	15.0%
82	Autistic	.06%
60	Seriously Emotionally Disturbed	4.6%
90	Learning Disabled	37.7%
50	Speech Impaired	41.6%
	Total Percent	*124.50%
	Total Number of Students	334

* Some students carry more than one Handicapped Code

This final table describes the district and it composition in terms of overage students. Further, the student numbers are separated into two groups; those who are older due to retention in-grade and those who are older for reasons other than retention.

TABLE X

SUBJECT SAMPLE HANDICAPPED BY GRADE
1988-1989

GRADE	N	RETAINED	NON-RETAINED
5	46	33	13
6	41	25	16
7	42	26	16

SUBJECTS

Subject Selection

The subjects for this study were students in grades five, six, and seven, who were overage for the grade in which they were placed. Overage was determined by referring to the modal age for the grades noted and constructing a band which extended from the first day a student became "too young" (in the case of these Oregon youngsters, that day was September 2nd, October 2nd, and November 16th). The variability of these dates is due to changes in State legal entrance dates. The band therefore extended from the first day students became ineligible to begin school to the last day students were ineligible to begin school. For the students in this study, those dates were variously September 1st, October 1st and November 15th of the following calendar years.

Initially an information and data base was constructed for all students in the District who were in grades 3-11. Next, the data were sorted by date of birth. This resulted in a set of potential study subjects all of whom were thus older than the modal ages for their grades. These lists were then validated as to birth dates and grade placements through the inspection of the students' cumulative records. The set of potential subjects was further delineated through the separation of those who were overage due to in-grade retention and those who were also overage but not as an action of retention in an earlier grade.

Following that process, the student school histories and assessment data available on all subjects were gathered. During that process, many subjects were deleted due to the lack of sufficient information usable for comparative purposes. The researcher then decided to limit the study to those overage subjects currently enrolled in grades five, six, and seven because the information about them was the most complete and accurate.

ACADEMIC AT-RISK FACTOR DESCRIPTION

Descriptions of the dependent variables which were entered in the data set as listed above. Information was gathered on all overage subjects with respect to academic

and demographic factors. The latter is addressed in the next section.

Criterion Referenced Test of Mathematics

This score represents the score attained on the district criterion reference test in the area of mathematics. The district standard for demonstrating adequate subject matter knowledge is 80 percent. The numbers reported in this study are stated in raw scores numbers for all subjects. In the case of the mathematics test, a raw score of 40 denoted the 80 percent criterion. Scores falling below 80 percent can be described as scores indicating at-risk status.

Criterion Referenced Test of Reading

This figure represents the score attained on the District criterion reference test. Its standard for demonstrating adequate subject matter knowledge is 80 percent. The numbers reported in this study are stated in raw scores. In the case of the reading test, a raw score of 30 denoted the 80 percent criterion. As with the mathematics test, scores below 80 indicated risk for academic failure.

Absence

This figure is the number of absences for each study subject during the 1988-89 academic year from which the data were gathered. All subjects are described in terms of

numbers of days absent from school in the 1988-1989 academic year.

Participation In Federal Meal Plans

These figures represent subject participation in Federal meal plans for breakfast and lunch based on income and familial considerations. All subjects are described in terms of their levels of participation in the plans.

Minority or Foreign Born Membership

Data collected on this variable were with regard to ethnicity and race. Data were gathered initially from the Annual Report submitted to the State Department of Education by all public school districts. They were further amplified through identification based on these factors as confirmed by the cumulative record folder picture record and direct interviews with those personally acquainted with the study subjects. All subjects are described in terms of their ethnicity and racial groups.

Handicapped Status Under PL 94-142

This variable noted which students were certified based on the standards of EHA, the Education of Handicapped Children Act. They were thus coded in the data set. All subjects are described in terms of their certification as handicapped.

INSTRUMENTS

The comparison of data was with three types of data seen as indicators of academic growth and which were available for all students; records of attendance, scores on academic indicators, and demographic information. These latter data were federal free/reduced meal status, minority group membership, gender and handicapping condition.

The tests outlined in Table XI were administered (it should be kept in mind that all students were in a grade placement one year lower than the one in which they are now). Thus, tests on current fifth, sixth, and seventh graders were administered when they were enrolled in the fourth, fifth, and sixth grades respectively.

Primary source data was obtained from the following sources: student cumulative records; individual student special education and behavioral records, Federal Handicapped Census reports, District Federal Report on Ethnicity, District information in regard to individual student participation in Federal Breakfast and Lunch Programs.

Test information was obtained from district assessment data gathered in the 1988-89 school year. It may be seen that the only assessments which were given to all students were the criterion reference test in reading and mathematics. Consequently, the selection of data for use

for indicating academic risk behavior were the scores obtained by students on the criterion reference measures.

Table XI describes the assessment instrument used by the district in the year of the study.

TABLE XI

DISTRICT FACTORS ASSESSMENT INSTRUMENTS
1988-1989

Grade	Assessment Instruments
5	Degrees of Reading Power Test
5	Criterion Reference Test: Reading
5	Criterion Reference Test: Mathematics
6	California Achievement Test: Reading Comprehension
6	California Achievement Test: MathematicsComputation and Concepts
6	Criterion Reference Test: Reading
6	Criterion Reference Test: Mathematics
7	Degrees of Reading Power Test
7	Criterion Reference Test: Reading
7	Criterion Reference Test: Mathematics

District Testing Program. The district's testing program has had many changes in the past few years. There have been three testing directors in as many years. In addition, curriculum managed instruction modules were used

in two buildings in selecting objectives for instruction, teaching to these objectives, and testing them. This was a computer managed instruction pilot project in those two schools last year. In addition, this district has not had a history of conducting standardized achievement testing in all grades. No formal testing has ever been done prior to the end of the third grade. The following section summarizes the results of criterion referenced tests administered to students in grades four through six. These students are now in grades five, six, and seven. The scores are reported with the grade levels of the students in their grades in the current 1989-1990 academic year. The final section of the chapter presents the models of the data analysis procedures. The figures will be added in Chapter IV.

Degrees Of Reading Power Test. The Degrees of Reading Power test, DRP, results displayed in Table XVI, is a relatively new test, both to the market and to the District. The College Board originated the test which is now published by another source. The DRP is used in some districts across the country and is used by the State of New York and other eastern seaboard states to certify reading competence for its students.

The DRP purports to measure reading comprehension of written prose by calibrating the difficulty of the material using a sophisticated CLOZE procedure based on such features

as length and complexity of sentences, number of words, length of words, etc. The result is a measure of the relative difficulty of the prose itself irrespective of the content. Test results provide generalizable information for curriculum and assessment use in any area using extensive prose e.g., reading, literature, science, history, mathematics, etc. This instrument uses an equal interval scale with absolute numbers across test levels. While the four forms vary in degree of difficulty, the scores obtained have the same meaning regardless of the test form taken. Forms are also multi-level, meaning students can take the form of the test most closely matching their reading attainment. Thus a score of 55 received by a fifth grader and a ninth grader means they can both read material at the same level of difficulty.

The scale is an analogic one. The scores yielded are compared to each other and to material in the outer world such as magazines, fiction works, scientific articles, etc. While some tests of reading require a certain rate of progress to remain at the same numeric place on the scale, the DRP does not. An expected rate of growth, however, is about four DRP units each year. In any case, if end of the year performance is the same as it was at the beginning of the year, the score will be unchanged. Similarly, if growth occurs, the scores will rise.

With respect to the meaning of the "Independent" and "Instructional" levels, the former is the level at which a student can understand prose at a comprehension level of 90 percent while the latter means the student can understand about 75 percent of material at that level. Thus, the test can be used both to arrive at reading levels of students as well as assist in initial diagnosis of learners. A further statistic, the "Frustration" level, can be reported but is not used in this study. It, however, is the level at which the student is presumed to be able to understand 50 percent or less of the material presented at that level.

PROCEDURES

The names of students in the grades surveyed were sorted according to their birthdays which were then compared with the grades in which they were enrolled. As described in Chapter I, a band of ages was developed and students were said to exceed the modal age for the grades in which they were enrolled by noting the first day on which they were ineligible for school entrance with other students born in the same year to the last day before they could legally begin. Using this method, 200 students emerged as older than the modal age while only seven were younger than one would expect (it should be noted that five of those younger were Indochinese students whose actual birthdays are often unclear at school entrance).

The original research plan included subjects from grades four through twelve. After initial attempts it was determined student records in grades 9 through 12 lacked reliability as accurate data sources. Thus, student records for students in grades five through eight were examined. The procedure was as follows.

The researcher developed lists of students who could be categorized as "overage" by the method described earlier. In addition, a list of the students who were younger than one would expect were generated and shared with building administrators. Next, the researcher went to each building and examined the cumulative record folders of all potentially identified subjects. There were 54 at grade five, 44 at grade six, 50 in grade seven, and 50 in grade eight. Data were gathered on the following variables: confirmation of age; reports of retention in-grade, if so, at which grade level; schools attended; and attendance records for all students. Information gathered from other District sources included subject participation in free and reduced meal plans sponsored by the federal government and the status of subjects with respect to handicapping conditions under PL 94-142. The data were personally identifiable only as long as they were needed to collect necessary data. Next, the researcher removed the names and histories of students for whom data were missing to the extent the subjects could not meaningfully be included.

Following this decision, it became clear it would be necessary to limit the sample to those students in grades five, six, and seven due to lack of complete information for students in grade eight.

DATA ANALYSIS PROCEDURES

The hypotheses presented below will be tested by use of the ANOVA and the Chi Square tests of significance. These were chosen for the reasons below:

The Analysis of Variance (ANOVA) looks for variance within and between groups to ascertain if there is more variance between two or more means at a selected probability level than is attributable to chance. For the purposes of this study, that is precisely the statistic needed. We are comparing the means of two groups of overage students with an intent to examine their similarities or differences.

The Chi Square test compares frequencies of occurrences within groups to see if one condition occurs more often in one group than in another. In the case of the demographic variables selected for this study, the intent is to see if any of the four conditions: gender; ethnicity; Federal meal plan participation; or handicapped status occurs with greater frequency in one or the other groups of overage students.

The following hypotheses were formulated into Primary, Secondary and Demographic hypotheses.

The primary hypothesis is that there will be no significant differences within groups between overage student who have been retained and those who have not been retained on academic indicators of at-risk performance.

The secondary hypothesis is that there will be no significant difference across grades five, six, and seven between overage students who have been retained and those who have not been retained on academic indicators of at-risk performance.

The demographic hypothesis is that there will be no significant differences between overage students who have been retained and those who have not been retained with respect to gender, minority group membership, participation in Federal free and reduced meal plans, or designation as handicapped under the provisions of PL 94-142.

Primary Hypothesis

The primary hypotheses are found in Tables XII through XV.

TABLE XII

PRIMARY ANALYSIS COMPARISON OF BOTH GROUPS
OF OVERAGE STUDENTS USING THE ANALYSIS OF VARIANCE
RETAINED VERSUS NOT RETAINED
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading					
Criterion Reference Test: Reading					
Absence					

The remaining analyses compared retained and not retained subjects with selected risk factors by grade level. The models for these analyses are shown in Tables XIII through XXI.

TABLE XIII

PRIMARY ANALYSIS COMPARISON OF VARIANCE FOR GRADE 5
RETAINED VERSUS NOT RETAINED SUBJECTS
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading					
Criterion Reference Test: Math					
Absence					

TABLE XIV

PRIMARY ANALYSIS COMPARISON OF VARIANCE FOR GRADE 6
RETAINED VERSUS NOT RETAINED SUBJECTS
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading					
Criterion Reference Test: Math					
Absence					

TABLE XV

PRIMARY ANALYSIS COMPARISON OF VARIANCE FOR GRADE 7
RETAINED VERSUS NON RETAINED STUDENTS
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading					
Criterion Reference Test: Math					
Absence					

Secondary Analysis

The Secondary Analysis was conducted to compare retained students across grade levels with respect to selected at-risk factors. The steps are displayed in graphic form in Tables XVI and XVII.

TABLE XVI

ANALYSIS OF VARIANCE WITH RESPECT TO
RETAINED STUDENTS ONLY
1988-1989

ASSESSMENTS	5	6	7
Criterion Reference Test: Reading			
Criterion Reference Test: Math			
Absence			

TABLE XVII

ANALYSIS OF VARIANCE WITH RESPECT TO
NON-RETAINED STUDENTS ONLY
1988-1989

ASSESSMENTS	5	6	7
Criterion Reference Test: Reading			
Criterion Reference Test: Math			
Absence			

Demographic Analysis

Chi Square Analyses were performed with the four demographic variables comparing each variable with the subjects who were retained and those who were not retained. A schematic representation in Tables XVIII through XXI is shown.

TABLE XVIII

CHI SQUARE COMPARISON OF RETAINED AND NON-RETAINED STUDENTS WITH RESPECT TO PARTICIPATION IN FEDERAL MEAL PLANS 1988-1989

	Participants	Non-Participants	N	Row Percent
Retained				
Not Retained				

TABLE XIX

COMPARISON OF RETAINED AND NON-RETAINED STUDENTS WITH RESPECT TO STATUS AS HANDICAPPED 1988-1989

	Not Handicapped	Handicapped	N	Row Percent
Retained				
Not Retained				

TABLE XX

COMPARISON OF RETAINED AND NON-RETAINED STUDENTS WITH RESPECT TO ETHNICITY 1988-1989

	Boys	Girls	N	Row Percent
Retained				
Not Retained				

TABLE XXI

COMPARISON OF RETAINED AND NOT-RETAINED STUDENTS
WITH RESPECT TO GENDER
1988-1989

	Boys	Girls	N	Row Percent
Retained				
Not Retained				

Results and discussion of these analyses follow in Chapters IV and V.

CHAPTER IV

RESULTS

Chapter IV contains the description of the investigative results of the Research Hypotheses outlined in Chapter III. The Primary and Secondary analyses were conducted with the use of the Analysis of Variance for both the Primary Analysis Hypothesis and the Secondary Analysis Hypothesis. The Demographic Hypothesis testing was conducted with the use of the Chi Square Analysis. The results of these tests may be seen in Tables XXII through XXXI.

The pages comprising the remainder of this Chapter present the statistical analysis with respect to the Primary, Secondary, and Demographic Research Hypotheses. A brief discussion follows each table. Amplification of these results will be found in Chapter V.

TABLE XXII

PRIMARY ANALYSIS COMPARISON OF BOTH GROUPS OF OVERAGE STUDENTS USING THE ANALYSIS OF VARIANCE WITH RESPECT TO THE RETAINED VERSUS THE NON-RETAINED STUDENTS 1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	356.988	1	356.988	6.102	.015*
Criterion Reference Test: Math	241.692	1	241.692	2.071	.153
Absence	15.238	1	15.238	.250	.618

* Indicates significance demonstrated

PRIMARY RESEARCH HYPOTHESIS

With respect to all subjects in the study: the ANOVA results supported the Primary Analysis Hypothesis for the dependent variables of the Criterion Reference Tests in mathematics and Absence. In both cases the ANOVA result obtained was P>.05. However, in the case of the Criterion Reference Test in Reading an ANOVA result of P<.05 indicated this result was not obtained by chance. Therefore, taking the results at face value, significance is indicated with respect to this variable. This significance is addressed in Chapter V.

Next, all subjects, both retained and not retained, were compared using at-risk indicators by grade levels. These comparisons are displayed in a Table XXIII.

TABLE XXIII

PRIMARY ANALYSIS COMPARISON OF VARIANCE FOR GRADE 5 RETAINED VERSUS NOT RETAINED SUBJECTS 1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	112.411	1	112.411	2.733	.106
Criterion Reference Test: Math	171.922	1	171.922	1.713	.198
Absence	.616	1	.616	.009	.924

With respect to the ANOVA analysis of academic at-risk factors of the retained versus the non-retained students in the fifth grade, both of whom are overage for grade, no statistical significance was demonstrated.

TABLE XXIV

PRIMARY ANALYSIS COMPARISON OF BOTH GROUPS WITH THE ANALYSIS OF VARIANCE RETAINED VERSUS NON-RETAINED GRADE 6 1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	184.381	1	184.381	2.914	.096
Criterion Reference Test: Math	300.295	1	300.295	2.374	.131
Absence	2.881	1	2.881	.039	.844

The results of the ANOVA test using the dependent variables of academic indicators of at-risk performance for sixth grade students in the sample yielded no statistically significant differences. Therefore, the Primary Analysis Hypothesis is supported with respect to these students.

TABLE XXV

PRIMARY ANALYSIS COMPARISON OF VARIANCE FOR GRADE 7
RETAINED VERSUS NON-RETAINED STUDENTS
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	25.215	1	25.215	.397	.533
Criterion Reference Test: Math	300.295	1	300.295	2.374	.131
Absence	11.207	1	11.207	.232	.633

The results of the ANOVA procedure for the overage students in grade seven supported the Primary Analysis Hypothesis. There will be no significant differences across grades five, six and seven, between overage students who have been retained and those who have not been retained on academic indicators of at-risk performance.

SECONDARY RESEARCH HYPOTHESIS

There will be no significant differences across grades five, six, and seven, between overage students who have been retained and those who have not been retained on academic indicators of at-risk performance.

TABLE XXVI

SECONDARY ANALYSIS
ANALYSIS OF VARIANCE
AMONG ALL NON-RETAINED STUDENTS ONLY
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	114.457	2	57.229	1.085	.346
Criterion Reference Test: Math	71.115	2	35.558	.349	.707
Absence	6.382	2	3.191	.037	.963

TABLE XXVII

SECONDARY ANALYSIS
ANALYSIS OF VARIANCE
AMONG RETAINED STUDENTS ONLY
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	448.050	2	224.025	3.888	.025*
Criterion Reference Test: Math	227.892	2	113.946	.891	.415
Absence	4.631	2	2.315	.047	.954

* Indicates significance demonstrated

The Secondary Research Hypothesis which stated there would be no significant differences across grades five, six, and seven in terms of at-risk indicators for students who have been retained and those who have not been retained, is supported in the case of the dependent variables of the Criterion Referenced Math test and absence. No significant differences were found. However, the ANOVA with respect to the Criterion Reference Test in Reading yielded a different result with statistical significance being demonstrated. This finding does not support the Secondary Analysis Hypothesis and will be discussed in greater detail in Chapter V.

DEMOGRAPHIC HYPOTHESIS

There will be no significant differences between overage students who have been retained and those who have not been retained with respect to gender, minority group membership, participation in Federal free and reduced meal plans, or designation as handicapped under the provisions of PL 94-142.

A Chi Square Analysis using these demographic variables was conducted for each of the variables cited above. Results in tabular form appear below in Tables XXVIII through XXXI.

TABLE XXVIII

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO ETHNICITY
1988-1989

	Non-Minority	Minority	N	Row Percent
Retained	68.29%	31.71%	82	100
Not Retained	91.11%	8.89%	82	100

p=<.05 (.004)*

* Indicates significance demonstrated

The demographic hypothesis with respect to Ethnicity was refuted. Statistical significance was demonstrated with the use of the Chi Square Analysis between the two groups. This finding will be discussed in greater detail in Chapter V.

TABLE XXIX

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO GENDER
1988-1989

	Male	Female	N	Row Percent
Retained	58.8%	41.2%	84	100
Not Retained	72.6%	26.2%	42	100

p=<.05 (.036)*

* Indicates significance demonstrated

Significance at the P<.05 level was found with the analysis of Gender using the Chi Square Analysis. This does not support the demographic hypothesis stating there would be no significant difference between the groups of overage students, those overage due to retention and those overage and not retained. With significance at the .036 level the analysis confirms that there are significantly more boys than girls in the total sample comprising the study. This finding is discussed in greater detail in Chapter V.

TABLE XXX

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO FEDERAL MEAL PLAN PARTICIPATION
1988-1989

	Non-Participants	Participants	N	Row Percent
Retained	47.56%	52.46%	82	100
Not Retained	64.44%	35.56%	45	100

p=>.05 (.068) (TREND)*

* Indicates significance demonstrated

The third demographic variable to be tested, that of participation in Federal meal plans by study subjects, revealed no statistically significant differences between subjects who are overage and retained and those who are overage and not retained. Thus, the hypothesis that there would be no statistically significant differences between

the groups in regard to this demographic variable is supported. Some would state the level of significance demonstrated indicates a trend toward significance. This matter is discussed in more detail in Chapter V.

TABLE XXXI

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO HANDICAPPED STATUS
1988-1989

	Not Handicapped	Handicapped	N	Row Percent
Retained	31.71%	68.29%	82	100
Not Retained	77.78%	22.22%	45	100

p=>.05 (.068) (TREND)

With respect to this last demographic variable, that of identification as handicapped, the Research Hypothesis is supported. There is no significant difference between the groups of students who are overage due to retention and those who are overage and not retained. This finding is discussed in more detail in Chapter V.

All the Research Hypotheses findings, discussions and recommendations are discussed in greater depth in Chapter V.

CHAPTER IV

RESULTS

Chapter IV contains the description of the investigative results of the Research Hypotheses outlined in Chapter III. The Primary and Secondary analyses were conducted with the use of the Analysis of Variance for both the Primary Analysis Hypothesis and the Secondary Analysis Hypothesis. The Demographic Hypothesis testing was conducted with the use of the Chi Square Analysis. The results of these tests may be seen in Tables XXII through XXXI.

The pages comprising the remainder of this Chapter present the statistical analysis with respect to the Primary, Secondary, and Demographic Research Hypotheses. A brief discussion follows each table. Amplification of these results will be found in Chapter V.

TABLE XXII

PRIMARY ANALYSIS COMPARISON OF BOTH GROUPS OF OVERAGE STUDENTS USING THE ANALYSIS OF VARIANCE WITH RESPECT TO THE RETAINED VERSUS THE NON-RETAINED STUDENTS 1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	356.988	1	356.988	6.102	.015*
Criterion Reference Test: Math	241.692	1	241.692	2.071	.153
Absence	15.238	1	15.238	.250	.618

* Indicates significance demonstrated

PRIMARY RESEARCH HYPOTHESIS

With respect to all subjects in the study: the ANOVA results supported the Primary Analysis Hypothesis for the dependent variables of the Criterion Reference Tests in mathematics and Absence. In both cases the ANOVA result obtained was P>.05. However, in the case of the Criterion Reference Test in Reading an ANOVA result of P<.05 indicated this result was not obtained by chance. Therefore, taking the results at face value, significance is indicated with respect to this variable. This significance is addressed in Chapter V.

Next, all subjects, both retained and not retained, were compared using at-risk indicators by grade levels. These comparisons are displayed in a Table XXIII.

TABLE XXIII

PRIMARY ANALYSIS COMPARISON OF VARIANCE FOR GRADE 5 RETAINED VERSUS NOT RETAINED SUBJECTS 1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	112.411	1	112.411	2.733	.106
Criterion Reference Test: Math	171.922	1	171.922	1.713	.198
Absence	.616	1	.616	.009	.924

With respect to the ANOVA analysis of academic at-risk factors of the retained versus the non-retained students in the fifth grade, both of whom are overage for grade, no statistical significance was demonstrated.

TABLE XXIV

PRIMARY ANALYSIS COMPARISON OF BOTH GROUPS WITH THE ANALYSIS OF VARIANCE RETAINED VERSUS NON-RETAINED GRADE 6 1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	184.381	1	184.381	2.914	.096
Criterion Reference Test: Math	300.295	1	300.295	2.374	.131
Absence	2.881	1	2.881	.039	.844

The results of the ANOVA test using the dependent variables of academic indicators of at-risk performance for sixth grade students in the sample yielded no statistically significant differences. Therefore, the Primary Analysis Hypothesis is supported with respect to these students.

TABLE XXV

PRIMARY ANALYSIS COMPARISON OF VARIANCE FOR GRADE 7
RETAINED VERSUS NON-RETAINED STUDENTS
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	25.215	1	25.215	.397	.533
Criterion Reference Test: Math	300.295	1	300.295	2.374	.131
Absence	11.207	1	11.207	.232	.633

The results of the ANOVA procedure for the overage students in grade seven supported the Primary Analysis Hypothesis. There will be no significant differences across grades five, six and seven, between overage students who have been retained and those who have not been retained on academic indicators of at-risk performance.

SECONDARY RESEARCH HYPOTHESIS

There will be no significant differences across grades five, six, and seven, between overage students who have been retained and those who have not been retained on academic indicators of at-risk performance.

TABLE XXVI

SECONDARY ANALYSIS
ANALYSIS OF VARIANCE
AMONG ALL NON-RETAINED STUDENTS ONLY
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	114.457	2	57.229	1.085	.346
Criterion Reference Test: Math	71.115	2	35.558	.349	.707
Absence	6.382	2	3.191	.037	.963

TABLE XXVII

SECONDARY ANALYSIS
ANALYSIS OF VARIANCE
AMONG RETAINED STUDENTS ONLY
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	448.050	2	224.025	3.888	.025*
Criterion Reference Test: Math	227.892	2	113.946	.891	.415
Absence	4.631	2	2.315	.047	.954

* Indicates significance demonstrated

The Secondary Research Hypothesis which stated there would be no significant differences across grades five, six, and seven in terms of at-risk indicators for students who have been retained and those who have not been retained, is supported in the case of the dependent variables of the Criterion Referenced Math test and absence. No significant differences were found. However, the ANOVA with respect to the Criterion Reference Test in Reading yielded a different result with statistical significance being demonstrated. This finding does not support the Secondary Analysis Hypothesis and will be discussed in greater detail in Chapter V.

DEMOGRAPHIC HYPOTHESIS

There will be no significant differences between overage students who have been retained and those who have not been retained with respect to gender, minority group membership, participation in Federal free and reduced meal plans, or designation as handicapped under the provisions of PL 94-142.

A Chi Square Analysis using these demographic variables was conducted for each of the variables cited above. Results in tabular form appear below in Tables XXVIII through XXXI.

TABLE XXVIII

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO ETHNICITY
1988-1989

	Non-Minority	Minority	N	Row Percent
Retained	68.29%	31.71%	82	100
Not Retained	91.11%	8.89%	82	100

p=<.05 (.004)*

* Indicates significance demonstrated

The demographic hypothesis with respect to Ethnicity was refuted. Statistical significance was demonstrated with the use of the Chi Square Analysis between the two groups. This finding will be discussed in greater detail in Chapter V.

TABLE XXIX

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO GENDER
1988-1989

	Male	Female	N	Row Percent
Retained	58.8%	41.2%	84	100
Not Retained	72.6%	26.2%	42	100

p=<.05 (.036)*

* Indicates significance demonstrated

Significance at the P<.05 level was found with the analysis of Gender using the Chi Square Analysis. This does not support the demographic hypothesis stating there would be no significant difference between the groups of overage students, those overage due to retention and those overage and not retained. With significance at the .036 level the analysis confirms that there are significantly more boys than girls in the total sample comprising the study. This finding is discussed in greater detail in Chapter V.

TABLE XXX

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO FEDERAL MEAL PLAN PARTICIPATION
1988-1989

	Non-Participants	Participants	N	Row Percent
Retained	47.56%	52.46%	82	100
Not Retained	64.44%	35.56%	45	100

p=>.05 (.068) (TREND)*

* Indicates significance demonstrated

The third demographic variable to be tested, that of participation in Federal meal plans by study subjects, revealed no statistically significant differences between subjects who are overage and retained and those who are overage and not retained. Thus, the hypothesis that there would be no statistically significant differences between

the groups in regard to this demographic variable is supported. Some would state the level of significance demonstrated indicates a trend toward significance. This matter is discussed in more detail in Chapter V.

TABLE XXXI

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO HANDICAPPED STATUS
1988-1989

	Not Handicapped	Handicapped	N	Row Percent
Retained	31.71%	68.29%	82	100
Not Retained	77.78%	22.22%	45	100

p=>.05 (.068) (TREND)

With respect to this last demographic variable, that of identification as handicapped, the Research Hypothesis is supported. There is no significant difference between the groups of students who are overage due to retention and those who are overage and not retained. This finding is discussed in more detail in Chapter V.

All the Research Hypotheses findings, discussions and recommendations are discussed in greater depth in Chapter V.

CHAPTER IV

RESULTS

Chapter IV contains the description of the investigative results of the Research Hypotheses outlined in Chapter III. The Primary and Secondary analyses were conducted with the use of the Analysis of Variance for both the Primary Analysis Hypothesis and the Secondary Analysis Hypothesis. The Demographic Hypothesis testing was conducted with the use of the Chi Square Analysis. The results of these tests may be seen in Tables XXII through XXXI.

The pages comprising the remainder of this Chapter present the statistical analysis with respect to the Primary, Secondary, and Demographic Research Hypotheses. A brief discussion follows each table. Amplification of these results will be found in Chapter V.

TABLE XXII

PRIMARY ANALYSIS COMPARISON OF BOTH GROUPS OF OVERAGE STUDENTS USING THE ANALYSIS OF VARIANCE WITH RESPECT TO THE RETAINED VERSUS THE NON-RETAINED STUDENTS 1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	356.988	1	356.988	6.102	.015*
Criterion Reference Test: Math	241.692	1	241.692	2.071	.153
Absence	15.238	1	15.238	.250	.618

* Indicates significance demonstrated

PRIMARY RESEARCH HYPOTHESIS

With respect to all subjects in the study: the ANOVA results supported the Primary Analysis Hypothesis for the dependent variables of the Criterion Reference Tests in mathematics and Absence. In both cases the ANOVA result obtained was P>.05. However, in the case of the Criterion Reference Test in Reading an ANOVA result of P<.05 indicated this result was not obtained by chance. Therefore, taking the results at face value, significance is indicated with respect to this variable. This significance is addressed in Chapter V.

Next, all subjects, both retained and not retained, were compared using at-risk indicators by grade levels. These comparisons are displayed in a Table XXIII.

TABLE XXIII

PRIMARY ANALYSIS COMPARISON OF VARIANCE FOR GRADE 5
RETAINED VERSUS NOT RETAINED SUBJECTS
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	112.411	1	112.411	2.733	.106
Criterion Reference Test: Math	171.922	1	171.922	1.713	.198
Absence	.616	1	.616	.009	.924

With respect to the ANOVA analysis of academic at-risk factors of the retained versus the non-retained students in the fifth grade, both of whom are overage for grade, no statistical significance was demonstrated.

TABLE XXIV

PRIMARY ANALYSIS COMPARISON OF BOTH GROUPS WITH THE ANALYSIS OF VARIANCE RETAINED VERSUS NON-RETAINED GRADE 6
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	184.381	1	184.381	2.914	.096
Criterion Reference Test: Math	300.295	1	300.295	2.374	.131
Absence	2.881	1	2.881	.039	.844

The results of the ANOVA test using the dependent variables of academic indicators of at-risk performance for sixth grade students in the sample yielded no statistically significant differences. Therefore, the Primary Analysis Hypothesis is supported with respect to these students.

TABLE XXV

PRIMARY ANALYSIS COMPARISON OF VARIANCE FOR GRADE 7 RETAINED VERSUS NON-RETAINED STUDENTS 1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	25.215	1	25.215	.397	.533
Criterion Reference Test: Math	300.295	1	300.295	2.374	.131
Absence	11.207	1	11.207	.232	.633

The results of the ANOVA procedure for the overage students in grade seven supported the Primary Analysis Hypothesis. There will be no significant differences across grades five, six and seven, between overage students who have been retained and those who have not been retained on academic indicators of at-risk performance.

SECONDARY RESEARCH HYPOTHESIS

There will be no significant differences across grades five, six, and seven, between overage students who have been retained and those who have not been retained on academic indicators of at-risk performance.

TABLE XXVI

SECONDARY ANALYSIS
ANALYSIS OF VARIANCE
AMONG ALL NON-RETAINED STUDENTS ONLY
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	114.457	2	57.229	1.085	.346
Criterion Reference Test: Math	71.115	2	35.558	.349	.707
Absence	6.382	2	3.191	.037	.963

TABLE XXVII

SECONDARY ANALYSIS
ANALYSIS OF VARIANCE
AMONG RETAINED STUDENTS ONLY
1988-1989

Dependent Variable	Sum of Square	Df	Mean Square	F	Significance F
Criterion Reference Test: Reading	448.050	2	224.025	3.888	.025*
Criterion Reference Test: Math	227.892	2	113.946	.891	.415
Absence	4.631	2	2.315	.047	.954

* Indicates significance demonstrated

The Secondary Research Hypothesis which stated there would be no significant differences across grades five, six, and seven in terms of at-risk indicators for students who

have been retained and those who have not been retained, is supported in the case of the dependent variables of the Criterion Referenced Math test and absence. No significant differences were found. However, the ANOVA with respect to the Criterion Reference Test in Reading yielded a different result with statistical significance being demonstrated. This finding does not support the Secondary Analysis Hypothesis and will be discussed in greater detail in Chapter V.

DEMOGRAPHIC HYPOTHESIS

There will be no significant differences between overage students who have been retained and those who have not been retained with respect to gender, minority group membership, participation in Federal free and reduced meal plans, or designation as handicapped under the provisions of PL 94-142.

A Chi Square Analysis using these demographic variables was conducted for each of the variables cited above. Results in tabular form appear below in Tables XXVIII through XXXI.

TABLE XXVIII

CHI SQUARE ANALYSIS RETAINED VERSUS NON-RETAINED WITH RESPECT TO ETHNICITY 1988-1989

	Non-Minority	Minority	N	Row Percent
Retained	68.29%	31.71%	82	100
Not Retained	91.11%	8.89%	82	100

p=<.05 (.004)*

* Indicates significance demonstrated

The demographic hypothesis with respect to Ethnicity was refuted. Statistical significance was demonstrated with the use of the Chi Square Analysis between the two groups. This finding will be discussed in greater detail in Chapter V.

TABLE XXIX

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO GENDER
1988-1989

	Male	Female	N	Row Percent
Retained	58.8%	41.2%	84	100
Not Retained	72.6%	26.2%	42	100

p=<.05 (.036)*

* Indicates significance demonstrated

Significance at the P<.05 level was found with the analysis of Gender using the Chi Square Analysis. This does not support the demographic hypothesis stating there would

be no significant difference between the groups of overage students, those overage due to retention and those overage and not retained. With significance at the .036 level the analysis confirms that there are significantly more boys than girls in the total sample comprising the study. This finding is discussed in greater detail in Chapter V.

TABLE XXX

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO FEDERAL MEAL PLAN PARTICIPATION
1988-1989

	Non-Participants	Participants	N	Row Percent
Retained	47.56%	52.46%	82	100
Not Retained	64.44%	35.56%	45	100

p=>.05 (.068) (TREND)*

* Indicates significance demonstrated

The third demographic variable to be tested, that of participation in Federal meal plans by study subjects, revealed no statistically significant differences between subjects who are overage and retained and those who are overage and not retained. Thus, the hypothesis that there would be no statistically significant differences between the groups in regard to this demographic variable is supported. Some would state the level of significance

demonstrated indicates a trend toward significance. This matter is discussed in more detail in Chapter V.

TABLE XXXI

CHI SQUARE ANALYSIS
RETAINED VERSUS NON-RETAINED
WITH RESPECT TO HANDICAPPED STATUS
1988-1989

	Not Handicapped	Handicapped	N	Row Percent
Retained	31.71%	68.29%	82	100
Not Retained	77.78%	22.22%	45	100

p=>.05 (.068) (TREND)

With respect to this last demographic variable, that of identification as handicapped, the Research Hypothesis is supported. There is no significant difference between the groups of students who are overage due to retention and those who are overage and not retained. This finding is discussed in more detail in Chapter V.

All the Research Hypotheses findings, discussions and recommendations are discussed in greater depth in Chapter V.

examined the Hypothesis Question with relation to all retained subjects and found no statistically significant data after examining all retained subjects in the areas of absence and criterion reference tests in both reading and mathematics. However, apparent significance was demonstrated with the criterion reference reading test, parallelling the primary analysis hypothesis.

Next, the same hypothesis question with regard to the non retained subjects in all grades represented was addressed. No statistical significance was found using the three indicators of subject performance on the two criterion reference tests for reading and mathematics or with respect to subject absence.

Demographic Analysis

The demographic hypothesis postulated that there would be no significant differences between those retained and those not retained regarding gender, handicapped status, participation in Federal meal plan programs, and ethnicity.

Gender. When the dependent variable of gender is examined, statistical difference at the p=.036 level is obtained. The Chi Square Analysis found that 57.16% of the total sample was comprised of boys with girls accounting for 42.16% of the group. Both the retained and non-retained groups had more boys than girls (58.8% of the retained group and 72.6% of the non-retained group).

These data support conventional wisdom that boys are more frequently overage for grade and are retained more frequently than girls. However, it should be noted that girls comprise a sizable proportion of this sample. The retained sample contains 41.2% girls and the non-retained group 26.2%. This represents a relatively large number of girls overage for grade. Further discussion regarding the issue of gender is found in the explanation of the Chi Square demographic variable analysis. This analysis relates to the composition of the groups vis a vis minority group membership.

Handicapped Status. When examining the Chi Square Analysis of membership in the groups of students certified handicapped under the definitions in PL 94-142, no significance has been demonstrated between the groups. A majority (68.29%) were not certified as handicapped while 77.6% of the non-retained students also were not certified as handicapped. However, it is worthy to note that the 32.39% of the retained and 23.78% of the non-retained students constitutes overrepresentation of this group compared to the district percentage of handicapped students at 10.4% of the total student population when these data were gathered.

Federal Meal Plan Participation. Subject participation in these plans (breakfast and lunch) was also analyzed using the Chi Square Analysis. This analysis found

that 53.44% of the retained students and 35.56% of the non-retained subject participated in these meal plans. While not statistically significant (p=.068), these are also greater numbers than one finds examining the participation levels of all students enrolled in the grades studied. The district participation level is approximately 30% for the grade levels under study.

Minority Group Membership. The last demographic variable examined is that of membership in a minority group. Minority or foreign born students comprise 31.71% of the retained population and 8.89% of the non-retained subjects. These levels were found to be statistically significant at the p=.004 level. One may conclude that this subset of the total grade enrollment appears disproportionately large in both groups of overage students when compared to the total grade enrollments in grades 5, 6, and 7. Further, of the total sample, 12.5% of the male subjects and 30.4% of the female subjects were identified as minority or foreign born while the total district minority population was 7.7% for the academic year in question.

Thus, in examining the results of the Demographic Analysis Research Hypothesis that no significant differences would be found with respect to the four demographic variables, it is found that the Demographic Hypothesis is supported with respect to some variables and rejected with others. The dependent variables of identification as

handicapped under PL 94-142 and participation in federal meal plans were not found to be statistically significant. However, substantial numbers of students who are overage were found in each group in excess of their representation in the total numbers of students in all grades under study.

In the case of gender and ethnicity, statistical significance was found negating the null hypotheses. There are significantly more boys in the total sample of overage students, both retained and not retained, than would occur naturally. Again, however, it should be noted that while boys form a clear majority of those retained, overage girls make up a large percentage of both overage groups, those overage due to in-grade retention and those not retained.

With respect to ethnicity, statistical significance exists with respect to the numbers of minority and foreign born students in the total sample of overage students. In both cases, the percentages of minority and foreign born students are significant. In addition, the percentage of female minority subjects is greater than that in the total population from which the sample was drawn at 30%. In addition, male minority students also account for a substantial part of the sample at 12.5%.

Comparisons With District Grades 5, 6, and 7. There were a total of 773 students enrolled in grades 5, 6, and 7 of whom 127 were overage. These numbers constitute 16.4% of the total student enrollment. Of this overage total of

16.4%, 10.9% were overage due to in-grade retention while 5.4% are overage and not retained.

Gender. Female students who are overage account for 5.4% of the total student population of grades 5, 6, and 7 while boys who are overage constitute 11% of the total population of the grades surveyed in the study.

Handicapped Students. Students in the subject sample certified as handicapped under the provisions of PL 94-142 comprise 28% of the overage student population contrasted with the district percent of handicapped at 10.4%.

Federal Meal Plan Participants. Approximately 30% of the total district enrolees participate in Federal meal plans (breakfast and lunch). The overage students participate in this program at a rate of 44.9% of the total 127 students while there are 7.4% of all students in the same grades who take part in these programs.

Ethnicity. According to the most recent district collected demographic information, the numbers of minority populations in the school district from which the sample was drawn are noted in Table XXXII.

TABLE XXXII

ETHNICITY
1988-1989

Ethnic Origin	Percentage of Enrollment
Asian Students (Indochinese, Korean, Japanese Chinese, Filipino)	2.1%
Black	1.3%
Native American	.7%
Hispanic	1.4%
Other (Native Alaskans, Russian, Romanian etc.)	.8%
Caucasian	93.7%

It should be noted the number and ethnic group representation has changed to the extent there are numerically more black students in one of the district schools than are enrolled in all but Portland inner city schools and one other high school in state of Oregon.

All figures above are as accurate and current as possible. However, it should be noted that there are continuing enrollments of students from other countries and cultures who were not included in the figures provided in the Table above. For example, a plant closure in Arkansas brought about 90 black students to the community when their parents accepted transfers to a aluminum plant in east Multnomah County. Romanian Pentecostal Christian families

have also settled in the community. While fewer than five Romanian families reside within the district attendance area, they account for in excess of 40 children among them. Many, however, drop out of school at an early age to enter the world of work or are too young to attend school. In addition, the district has a few students who are the children of Japanese businessmen, temporarily residing in the community, and a few who have entered this country as political exiles from Iran, El Salvador, Nicaragua and Lebanon. All in all, however, the children who may be classified as either minority or foreign born comprise 3.6% of the population of grades 4, 5, and 6 but constitute 22% of the sample in this study.

The frequency of student absence is often used in the literature as a correlate of behavior placing students at rsk for academic failure and early exits from school. Table XXXIII summarizes absence rates of the overage as well as the total populations of the grades considered in this study.

TABLE XXXIII

ABSENCE
1988-1989

GRADE	X ABSENCE-OVERAGE	X ABSENCE-MODAL AGE
5	10.05 DAYS	6.69 DAYS
6	9.87 DAYS	7.50 DAYS
7	9.39 DAYS	7.09 DAYS

The table above graphically illustrates that while overage students do indeed miss school frequently, so do the students who are not overage. As a discriminator of at-risk factors, it would seem attendance may not be as reliable an indicator of potential school failure as the literature suggests, particularly if one is looking for a catalyst variable predicting propensity to leave school. Use of the attendance variable may yield large numbers of students who are frequently absent but many of whom have no other risk factors. However, this finding may not be generalizable to other districts. Further research with respect to this finding might be pursued. This finding may also be yet another example of forcing an old paradigm to fit a new problem. The general perception is that most children attend school most of the time and that those who frequently are absent are atypical.

The figures above suggest that many children are absent a good deal of the time. In all grades in which

absence was tallied, the total percentage of absence is between five and seven percent, irrespective of age status. In the final section of this chapter, a recommendation in regard to absence is found.

Table XXXIV below portrays the performance of the overage students on the district criterion reference measures. As is noted earlier in this study, the district from which the study subjects were drawn has established 80% correct on the criterion reference measures as the standard at which it can be said students demonstrate adequate mastery of the absence tested.

Below are found the mean scores of overage students on these measures. Students in all grades took both criterion referenced measures.

CHAPTER V

DISCUSSION OF FINDINGS AND RECOMMENDATIONS

Few of us take the pains to study the origin of our cherished convictions; indeed, we have a natural repugnance to so doing. We like to continue to believe what we have been accustomed to accept as true, and the resentment aroused when doubt is cast upon any of our assumptions leads us to seek every manner of excuse for clinging to them.

The Human Comedy
James Harvey Robinson
1 9 3 7

This final chapter is divided into three sections. The first section is devoted to a discussion of the statistical results obtained and reported in Chapter IV. These findings relate to the ANOVA's and Chi Square Analyses performed. The second section examines the findings with respect to other information available regarding the entire set of students from whom these subjects were drawn. The final section consists of a discussion of the study in totality and concludes with recommendations the researcher offers to others who may wish to pursue this topic or one closely related to it.

STATISTICAL FINDINGS

Primary Analysis

This hypothesis is supported for two of the dependent variables, those of subject performance on the Mathematics Criterion Reference Test, and that of student absence for the year in which the data were collected. When comparing all study subjects, there are no statistical differences between the groups. In the case of the Criterion Reference Test in Reading, however, a statistically significant difference is found at p=.015.

While there can be no certainty as to the reason for this apparently statistically significant finding, a threat to internal validity is raised, that of instrumentation. While the criterion referenced mathematics tests administered to grades 4, 5, and 6 were aligned to district curriculum and grade levels, that was not the case with the Criterion Referenced Test in reading. All students in grades 4, 5, and 6 (those now in grades 5, 6, and 7 respectively), were given the same test with the same criterion for demonstrating acceptable performance, i.e. 80% correct. This flaw in instrumentation may very well account for the differences found with respect to this variable. Such an administration practice would seriously disadvantage the students in the lowest grade to whom the test was given

as they have not had the benefit of the extra years of instruction as had the older students. If one accepts this explanation of apparent statistical significance, the statistic may be disregarded and this anomaly explained. It may then further be stated that the Primary Hypothesis is supported in all respects. However, test data correctly administered and scaled are not available to permit a sure and certain conclusion in this regard.

The second sets of analyses with respect to the Primary Research Hypothesis examined all subjects in grades 5, 6, and 7 comparing those who were retained and those who were not. All three dependent variables, the criterion referenced mathematics and reading tests as well as the variable of student absence showed no statistically significant differences in the case of the subjects currently in grade 6.

When analyses of variance with all subjects in grades 5, 6, and 7 were conducted using the same three variables seen as indicators of academic at-risk behavior, the same results were obtained. Thus it may be stated that the Primary Analysis Hypothesis is supported by statistical evidence.

Secondary Analysis

The Secondary Research Hypothesis examined at-risk indicators across grades 5, 6, and 7 with respect to academic indicators of at-risk danger. This analysis first

TABLE XXXIV

CRITERION REFERENCE MEASURE RESULTS
FOR OVERAGE STUDENTS
1988-1989

Grade	Test	X Raw Score	Percent Correct
5	Criterion Reference Math	27.67	55.3%
6	Criterion Reference Math	25.97	51.9%
7	Criterion Reference Math	27.97	55.9%
5	Criterion Reference Reading	18.41	49.8%
6	Criterion Reference Reading	21.25	57.4%
7	Criterion Reference Reading	24.41	66.0%

SUMMARY OF STATISTICAL FINDINGS

It is now possible to draw some conclusions from the statistical analyses of the research hypotheses. In addition, the ANOVA analyses and the Chi Square Tests have allowed findings to surface from which one can form opinions as to educational significance. Following the Statistical Analysis Summary will be found discussion and recommendations for educational practice emanating from these findings: boys are retained more often than girls;

girls form a substantial part of the cohort of overage students; minority group members are represented in both groups of overage students in significantly greater numbers than they represent either in school or in the larger community; girls from minority groups appear in unusually large numbers in this sample; overage students participate in Federal meal plans with much greater frequency than their modal age peer and that handicapped students also appear with greater frequency among the overage population than they do in the population at large in the district.

Further, when one examines the academic performance of the overage students relative to the standard set by the district for demonstrating adequate academic performance, the highest percentage correct relative to the 80% standard is 66% with the remainder of the percentages of correct responses ranging from 49.8% and 57.4% correct.

There is a great deal of evidence suggesting that not only do overage students perform poorly on academic measures designed by the district, they are also overrepresented in terms of male students, minority group female students, participation in Federal meal plans, in the proportion of handicapped students, and in the percentage of minority and foreign born students who are in the overage category compared to their incidence in the general community population as well as the numbers registered in the grades under study.

With respect to the original question around which this study was designed, it may be stated that no significant differences exist between the two groups of overage students in terms of the academic indicators used. The only apparent significant academic result is likely the consequence of an instrumentation problem. Support for this point of view is also seen in that the entire cohort who took last year's reading Criterion Reference Test referred to also scored very poorly. This lends credence of an attribution to instrumentation as opposed to a genuine academic difference to explain apparent significance.

However, when one examines the demographic variables of gender, Federal meal plan participation, membership in the groups of students named as handicapped or those who are minority or foreign group members, more information emerges. Based on the Chi Square Analyses there are significant differences associated with gender and minority group membership. Boys are overrepresented in the retained and overage category within the set of students who are retained and are overage. Within this group itself, it is also seen that there are disproportionate numbers of female minority students in both overage groups.

DEMOGRAPHIC CONSIDERATIONS

There are a number of conclusions one may draw from the analysis of the demographic data. Gender is not only

significant for the disproportionate number of overage male subjects. There are also an increasing number of female students falling in the category of overage for grade. Perhaps the presence of larger numbers of girls is a sign the sexes are being treated more equitably. While this may be the case, it is even more likely girls are easier to retain than boys as many parents' aspiration levels for girls are still lower. In addition, there is likely to be less ego involvement in the retention of a girl in many families compared to the application of the same intervention with male children; particularly in families of low socioeconomic and educational strata. Finally, the presence of large numbers of minority female students in both overage groups may suggest the imposition of this kind of strategy on members of minority cultures who either cannot or will not express an opinion differing from that of the school. The position of girls in many subcultures is not a highly valued one.

A familiar pattern emerges when one examines the matter of the relatively large percentages of minority and foreign born students in both groups of overage students. The research is replete with statistics indicating the rate of school completion for these groups is far lower than that of majority culture members. At the same time the graduation rates of Black, Hispanic and other minority group members are rising, the absolute numbers for members of

these groups are still are much higher than those of the dominant culture. As our country accepts even greater numbers of persons of color, Southeast Asians, Hispanics, and other language, cultural, and racial groups, it is incumbent on us to continue finding ways to acculturate and include, not exclude, these groups from participation in mainstream America. If we continue to effectively disenfranchise these students, we will extract a terrible toll for not only those who have failed to complete appropriate educational programs but also for all of us. As the balance of power, both economic and political, shifts in the world, our nation can ill afford to lock out massive numbers of any group if we are to maintain a competitive posture. Further, simple justice dictates we place no further obstacles to success in the paths of minority young people than already exist. As long as communities fail to accept ownership of the problems faced by minority group members, strategies to strengthen our schools will surely fail. Perhaps our ethnocentrism as a nation requires examination. Our failure to inform ourselves as to the cultures and beliefs of minorities may not be xenophobic but it does speak to an apparent lack of interest in them. Nevertheless, we continue to behave as though school were the epicenter of the universe. The continuation of de facto segregation and other practices isolating and insulating us from those minority members of our communities may well be

directly related to the apparent continuing decline in the effectiveness of the teaching mission of the American public school systems. Even in the midst of such dismal reflections, however, we would do well to keep in our minds the fact that however unwieldy, unwise or unworkable our systems may be, this country remains alone among nations in extending educational safeguards to nearly all who live within its boundaries.

Many of the factors associated with school failure have their genesis in the world beyond the school. Poverty, homelessness, poor health, unwanted pregnancy, dysfunctional families, inept parenting, inadequate housing, poor nutrition, crime, and joblessness are beyond the scope of the institution of the public school. All these factors directly impinge on the learning capacities and motivation of many learners. However, educators are powerless to change these directly. The influence we can exert is perhaps even greater than if we had direct access to conditions which undermine education. An educated citizenry is the only licit means by which these societal determiners can be changed. If educators fail to act in areas they can directly influence; the chances of producing literate future generations is greatly diminished.

ACADEMIC FACTOR DISCUSSION

The lack of significance in the academic indicators in both groups challenges conventional wisdom in many ways. First, it supports the myriad of research concluding that overage status is directly associated with higher rates of leaving school before completion of appropriate educational programs. This study would indicate the variable of overage itself, irrespective of the reasons for such a condition, is a global predictor of possible failure.

It is at this point that the tacit and propositional knowledge of educators and others clashes. Educational decisions are often made based on tacit knowledge (that which may be seen as conventional wisdom, folklore, craft knowledge, and experiential information). Propositional knowledge, on the other hand, is that which is derived from research or other methods of gaining knowledge.

Propositional knowledge, such as that appearing in the preceding review of the literature is quite specific in stating in-grade retention is a flawed intervention.

Shepard and Smith (1987) state:

> Let us not mince words. We see little justification for retentions or for programs that add a year to a pupil's career in school. The evidence is quite clear and unequivocal that the achievement and adjustment of retained children are not better and in most cases are far worse than those of comparable children who are promoted. (p. 134)

As noted earlier in this study, some parents keep their children (especially boys) out of school when they are of legally appropriate age in a belief this "extra gift of time" will heighten their chances of school success. The data in this study refute this idea. The writer believes this intervention to be another example of tacit knowledge at work irrespective of the propositional knowledge available. For the most part, only members of middle and upper middle class families employ this strategy. It is also possible that tacit knowledge has arisen from making a flawed connection between remaining home an extra year and doing well in school as a apparent consequence of this practice. The families of the children of the poor and the children of chaos now seen in increasing numbers in our schools appear to engage in this practice infrequently, if ever. In the research with student folders done in the data-gathering phase of this study, this strategy was, almost without exception, unused by economically deprived families. On the contrary, the children of the poor and disadvantaged enter school as soon as legally able.

The children who are kept out may be those who would most likely be successful whenever they entered school. Looking at the factors associated with educational success e.g., parent participation, economic stability, good parenting practices, adequate nutrition, and appropriate role modeling; it is quite likely these are the factors

leading to school success for these children, in any case not a delayed entrance to school. In fact, this study found a number of students falling into this category who not only outperformed the retained students but whose performance exceeded that of the students who were not overage. This apparent contradiction helps to intermittently reinforce these beliefs. Behaviorists suggest this type of reinforcement is the most powerful of all.

A further example of the effect of this tacit craft-knowledge is gained by listening to those who most frequently retain students, teachers of the primary grades. They are likely to see a short-lived increase in student performance when the students repeat previously presented absence, this time somewhat more successfully. However, for the most part, primary teachers who have retained students with the best of motives are rarely aware of the eventual educational outcomes for the students they have retained. Elementary teachers rarely if ever visit a secondary school to count the number of 19 year old seniors. Students often begin the process of dropping out in the primary grades; they complete it much later during their high school years.

Schools must make all possible efforts to work within their spheres of influence. These areas are those within the direct control of the schools. While educators have little if any control over outside variables associated with failure; they have everything to say about retention, and

other educational placements such as pre kindergarten and transition classrooms, the effects of which are the same. Children in these placements are a year older than their peers. A rose by any other name is still a rose, one might say. Abundant evidence exists that the out-of-school variables affecting student failure must be solved by society at large.

Grade repetition or other strategies producing overage students cannot effect changes or reverse negative patterns emanating from beyond the school community. If ever an educational problem could be ameliorated by direct intervention and leadership at the building level, the problem posed by overaged students is one. Educational leadership in a profession politicized needs to assert itself where pedagogy and politics have become intertwined. Those who create, direct, and implement policy need to make decisions based on educational and scholarly realities, from propositional and tacit knowledge, if you will. Leadership should be by policy and procedure, not default or caprice. If professionals can begin to view grade repetition or other interventions adding a year to children's schooling and raising educational expenditures, as a last resort rather than a first one, it may be possible to construct and implement designs for assistance leading toward improvement of student performance to the benefit of students.

Bucko (1986) stated:

> Probably no single decision a school administrator makes is more significant in the life of individual students than that of retention . . . administrators in the field of education are professionals with access to a broad range of information about any child that can be drawn from teachers, parents, and professional support staff. (p. 12)

RECOMMENDATIONS

Recommendations For Practice

1. Teachers should be supplied with all materials to keep them abreast of applied research in the area of interventions for students who are not succeeding in school.
2. Building and district administrators should establish or review policies on in-grade retention and install ones guaranteeing administrative notice and review of such placements.
3. Building administrators should affirm all grade placements for students after ascertaining the ages and prior placements of students.
4. Building administrators and staff should review all de jure retentions of students new to their schools and make conscious decisions to affirm or reverse the decisions, making certain experiences in a year which is repeated is qualitatively different, not just more of the same.

5. Building administrators and staff should be made aware of the representation of economically disadvantaged, minority group, and handicapped students in their respective schools and remain sensitive to potential problems in the educational process which are peculiar to members of these groups.
6. When educational strategies used in helping students whose academic performances are below standards, educators should examine which interventions, unique to these students' needs, can be employed to assist them. The decision to retain or not retain should be made based on how these decisions will impact future educational experiences during the year of retention which will be qualitatively different, rather than more of the same.
7. All educators should be careful to constantly redefine what is "normal" in terms of intellectual and emotional development. Both have wide variances. Educators need to understand that the range of students designated as average on standardized tests encompasses over 68% of the membership of typical groups. Decisions made on judgements of intellectual and emotional development of young children are often

inaccurate. Children and their families may be the ones who pay for hasty decisions based on incomplete data.

8. The issues of excessive student absence should be addressed as suggested earlier in this study. While it is accurate to state at-risk students are frequently absent, the high absence rates for modal age students are cause for concern. Educators will be well advised to inspect the absence rates for their own schools and determine which practices in regard to absence to their respective schools may, in fact, promote excessive absenteeism. When schools advise parents to keep sick children at home and emphasize that schools do not provide child care prior to the daily opening hour for schools, they may be providing tacit support to parents who are already disinclined to send their children to school on a regular basis.
9. The problems of access to student records and the vital importance of the need for accurate school histories cannot be overemphasized. As our schools' populations and compositions change, it is even more important to keep accurate data on students. Placements made or affirmed with little or no accurate data are not in the best

interests of either students or those who teach them. This needs to become a priority for all schools. Valid and genuine empowerment of classroom teachers will come about only when they are able to make decisions based on possession of all pertinent information relevant to students in their charge.

Responsibility for student records and their contents should be returned to classroom teachers. It is possible to follow the mandates of laws governing records and access without depriving those who are most likely to profit from such access needed information about prior school experiences.

Accurate information about developmental issues as well as presentation of data such as has been presented in this study and those referred to in it should be made available to those entering the profession, parents, and practitioners in America's school systems.

Recommendations For Research

1. Research is called for to codify all the systems used in this country to account for students and their grade placements. This kind of information placed in the hands of educational practitioners will allow them to compare methods of student

accounting such that at-risk factors as discussed in this study can be seen clearly.

2. Research studies replicating this study should be conducted in urban and rural settings and with other mixes of student populations.
3. Longitudinal studies of progress which parallel the progress of more sets of overage students should be accomplished particularly with respect to those students who are overage due to deliberate delay of entry. Practitioners and parents who make decisions on their tacit knowledge in regard to the consequences of such delay would profit from such studies.
4. Research should be conducted to demonstrate what kinds of educational interventions not adding a year to childrens' schooling should be investigated. These results should be shared with classroom teachers and administrators. Retention is most often accomplished with the belief repetition of academic material will increase student knowledge. It is in the absence of alternate interventions that students are retained.
5. Further meta analyses of research in the field of student retention should be done. At this time, seven years after A Nation At Risk was published,

> many school systems are attempting to cope with the down side of programs designed to promote academic analysis. For some students, the "rising tide of mediocrity" has enveloped them. They are not performing better but worse. Programs establishing promotional gates have left many behind these gates. While the academically advantaged may perform better in the presence of higher standards, this does not seem to be the case for students held back pending successful academic experiences.

CONCLUSIONS

The continuing quest for information and evidence of the components of effective educational practices should be a dynamic one in which knowledge acquired is knowledge shared. The conclusions of this study are that no significant differences in academic indicators of at-risk performance were found between the two groups studied. Further, while the demographic variables of status as handicapped under PL 94-142 and participation in federal meal plans showed no discernable or significant difference between the overage groups, some disquieting associations were found. The overrepresentation of both male students and minority group members in the sample is cause for concern. More chilling, however, is the information that

with respect to all demographic variables, students who are economically disadvantaged, handicapped, male, and members of minority or foreign born groups are present in much larger concentrations than in the general population of the grades studied. With the preponderance of evidence that retention is an ineffective if not harmful practice and that merely being overage increases one's risk of failing to complete school, a reevaluation of promotion and retention policies is in order. Retention appears to be a universally applied cure for student failure to achieve irrespective of a demonstrated relationship between retention and increased learning. Much will depend on the responses of educators to this challenge. The caveat in medicine's Hippocratic Oath which is to above all, do no harm was recently noted in The Kappan (Frymier & Gansneder, 1989, p. 146).

LIMITATIONS OF THE STUDY

Limitations of this study were addressed briefly in Chapter I. Those and others are addressed in this section.

This study did not address alternatives to retention. It is strongly suggested that others focus efforts in areas of examining educationally appropriate interventions for students who are not succeeding in school. Perhaps why students fail to learn needs investigation and definition instead of a metaphoric slaying of the harbinger of tidings of bad news, in this case, that of student failure.

The instrumentation used was not based on standardized test results. This was not possible due to the paucity of these kinds of data for the grades studied. However, in addition, the criterion reference tests may provide the most balanced view of how the overage students are performing compared to the expectations of the district for them.

This study does not necessarily apply to overage students in urban or rural environments. It was intended to focus on students in suburban schools, many of which have undergone massive restructured with the advent of problems heretofore believed to be confined to inner-city schools.

Researcher bias against retention could have influenced the outcome of the study. However, while it is possible one's point of view may color information presented, it should be emphasized that materials supporting the practice of retention are scarce. In fact, they are nearly absent except to the degree cited.

Others are encouraged to review the suggestions for research and replicate this type of ex post facto study as noted in the recommendations for research. The elements used in this study are available in all school districts in this country. Replication studies would add the weight of others to the conclusions drawn by this researcher. If other studies arrive at differing conclusions, the research on the

subject of retention would still be more complete in regard to the overage students, whether retained or not.

CLOSING

There are no significant differences between the groups of overage students with respect to academic indicators of at-risk performance of these students. The research hypotheses are therefore supported except as previously noted. However, the investigation of student membership in the category of overage students in terms of demographics (gender, minority group membership, participation in Federal meal plans, and identification as handicapped) provides evidence members of all these groups as well as male students are present to a far greater extent than they are found in the general population. It is the conclusion of this researcher that retention as an educational intervention results in placing students at risk for further failure experiences, increasing the likelihood they will not complete appropriate academic programs.

To the extent we continue behaviors which indicate continued faith in the existence of outdated and discarded paradigms, we may stand fairly accused of failure to acknowledge today's reality. Flawed decisions based on faulty premises may exacerbate life and learning problems of students who do not experience success in school. Remedies based on tacit beliefs and not supported by propositional

knowledge may not help students but ironically, may contribute even further to the very problems the solutions were meant to address.

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